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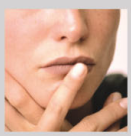

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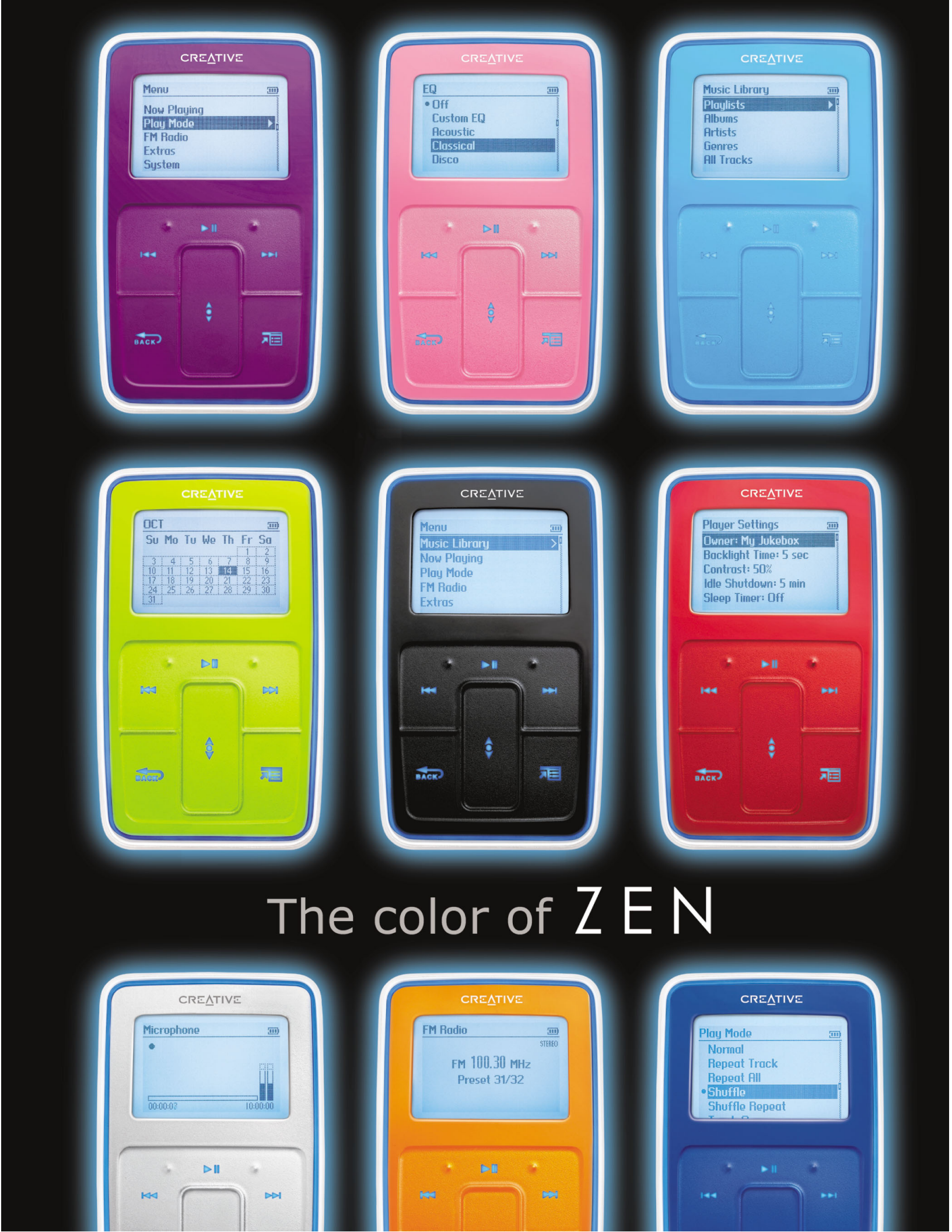
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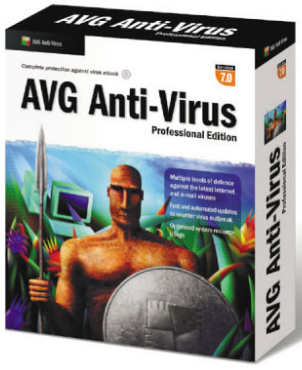

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lifestyle close-up

Sport & GPS Devices

Today's woman strives to stay connected in every part of her life, even when exercising and exploring the great outdoors. This month, we'll show you how the latest in CE sport and GPS devices can improve your health and well-being while keeping you safe, fit, and linked to friends and family.

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Open

There's always something new, interesting, and stylish happening in the world of consumer electronics. That's why the Open section packs the latest news and trends into the first few pages of *CE Lifestyles*, along with the sparkle and bling that you can buy to accessorize your devices.

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WHERE TALL TALES MEET HIGH TECHNOLOGY.

INTRODUCING JVC'S HD-ILA TV

Jerry Bruckheimer
Producer

Chart a course for extreme brightness and high resolution with JVC's HD-ILA TV, powered by 3-Chip D-ILA. Featuring amazing picture quality and incredible sound, JVC's D-ILA (Direct Drive Image Light Amplifier) TV is designed to change the way you experience television. If you've been on a treasure hunt seeking both style and state-of-the-art in one cool, thin package, look no further – your search is over. But beware: with JVC's HD-ILA TV you just might actually feel as though there are pirates in your living room.

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CE @Home

The consumer electronics in our homes are no longer limited to TVs and DVD players. Smart appliances, home automation, and whole-house audio systems are becoming more and more common and affordable for families, and with so much available, why check CE at the door?

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CE Lite

Most CE devices are all about fun. Here, we'll tell you about the latest albums and films to catch, so you can make sure your entertainment is as up-to-date as your gear. And so as not to forget our roots, "Retroscope" traces how a favorite CE device has changed over the years.

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Editor's Note

I played tee ball as a little girl, and I was good at it, as good as any 8-year-old tee-ball player could get. My parents still have a couple of clippings that our local newspaper ran about the game where I hit two triples and a home run. I never understood why the old "You throw like a girl!" was an insult, because I could throw with the best of 'em, even from center field.

Thankfully, that little athlete never really left me. I still enjoy watching and playing baseball, and I love riding my bike around the trails near our home. I keep active because it keeps me feeling good and feeling fit. I know that most of you are similarly fitness-minded, which is why this month's issue of *CE Lifestyles* is devoted to sport devices for everyone from casual walkers to serious cyclists. My favorite device we cover is the Rio Forge (in "MP3 Players Built For Sport" on page 48), an MP3 player designed specifically for athletes that comes in a gorgeous red color and fits perfectly in my hand (or around my bicep). We also look at pedometers, cadence monitors for bikes, GPS units, and other devices that can keep you and your family healthy and connected.

And it was a happy coincidence that also this month *CE Lifestyles* partnered with sports network ESPN to reprint some of our past articles for a conference it's having about HDTV. I certainly won't be a guest on SportsCenter anytime soon, but when you think about it, *CE Lifestyles* readers and ESPN fans are both keenly interested in fitness and technology. Funny how these two subjects are often neutral territories for both genders. I guess it's further proof that doing anything "like a girl" is no longer an insult.

Live well, friends.

Katie Sommer
Editor, *CE Lifestyles*
katie-sommer@celifestyles.com

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Customer Service
(For questions about your subscription or to place an order or change an address.)
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CE Lifestyles
P.O. Box 85380
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Hours
Mon. - Fri.: 7 a.m. to 8 p.m. (CST)
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Online Customer Service & Subscription Center
www.celifestyles.com

Web Services
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webhelp@celifestyles.com
(800) 368-8304

Authorization For Reprints
(800) 334-7458
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Editorial Staff
editor@celifestyles.com
FAX: (402) 479-2104
131 W. Grand Drive
Lincoln, NE 68521

Subscription Renewals
(800) 424-7900
FAX: (402) 479-2193
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ce news

Compiled by Rachel Derowitsch

New Magellan GPS Receiver Sports Several Industry Firsts

The new Magellan eXplorist 500 GPS receiver ($399.99) from Thales Nagivation (www.magellangsp.com) sports several exclusive features for GPS (global positioning system) receivers. For starters, it is the only handheld device of its kind that features file management capabilities similar to those on desktop and laptop PCs. Other unique features are its unlimited memory card expansion and ability to run on either rechargeable lithium-ion batteries or a AAA-battery clip. And it's the only GPS receiver than can calculate both a perimeter and area.

Users will appreciate the eXplorist 500's geocaching manager software, another first for handheld GPS receivers. This software lets you load information straight from the Web to the receiver, instead of manually entering it.

Weighing less than four ounces, the waterproof eXplorist 500 offers a full-color, 2.3-inch diagonal display for good visibility night or day. Optional accessories include MapSend software, carrying cases, and power adapters. (For more information on portable sport and GPS devices, see our Lifestyle Close-Up on pages 36 through 53.)

Panasonic Home Theater Systems Are Wireless-Ready

Panasonic (www.panasonic.com) has unveiled three new surround-sound home theater systems designed to work with the company's new SH-FX50 wireless rear receiver and speakers ($199.95). The systems are also compatible with Panasonic's new wireless headphones, the RP-WH5000 ($249.99). The headphones, which work up to 30 feet away from the recharging base, automatically turn on when placed on a user's head and turn off when taken off.

The three new home theater systems are the SC-HT730 ($349.95), the SC-HT830V ($399.95), and the SC-HT930 ($499.95).

Compact Canon Projectors Provide Presentations On The Go

Two new multimedia projectors from Canon (www.usa.canon.com) offer consumers powerful options at two price levels. The higher-end model, LV-7230 ($2,299), boasts a 1.6X optical zoom, which can project an image in an eight-plus foot diagonal area from about eight feet away. Its light output, measured in ANSI Lumens, is 2,000. (The higher the number of lumens, the brighter the projector.) It also features a 380:1 contrast ratio, emits just 34dB (decibels) while in silent mode, and weighs 6.4 pounds.

Weighing 5.1 pounds, the more affordable LV-S4 ($1,399) sports a 300:1 contrast ratio, 1,500 ANSI Lumens, and a quiet 33dB.

Both projectors can operate in **Greenboard** mode. That means if you need to give a presentation in a room without a screen or white board, the camcorder can adapt its color balance to project on a green chalkboard without skewing the appearance of the content. In addition, both models can connect to laptops, DVD players, VCRs, and Canon digital cameras and camcorders and operate via a wireless remote control.

New Apple iPods Pack A Big Playlist

To say that the new Apple iPods (www.apple.com) store a collection of your favorite songs is a gross understatement. Who has 15,000 favorite songs?

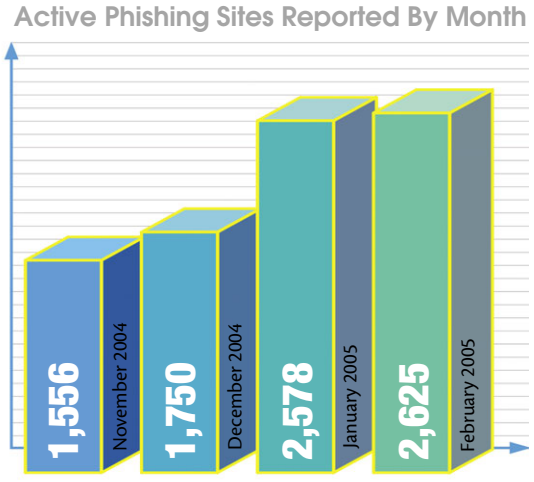
That's about how many tunes the Apple iPod 60GB ($449) can hold, whereas the Apple iPod 30GB ($349) can store half as many. Each model also can hold as many as 25,000 digital photos, and they work with an optional AV cable, so users can connect the iPod to a projector or big-screen TV and display photos as a slideshow.

Phishing Web Sites On The Rise

Phishing is a form of identity theft whereby hucksters try to deceive consumers into divulging personal information, such as a credit card or bank account number, by posing as legitimate businesses. According to the Federal Trade Commission, phishing is the top complaint consumers lodge with the FTC.

The Anti-Phishing Working Group (APWG, www.antiphishing.org) has been tracking phishing Web sites since November 2003, and it reports that the number of such sites is on the rise. As of February, the latest month for which the group had data, 2,625 active phishing sites had been identified. Furthermore, 13,141 unique phishing emails were reported to the APWG in February alone.

Predictably, many phishers pose as financial institutions, thereby hijacking brand names. The APWG says that since November 2003, 149 brands have been hijacked. In January, eight of the nine newly hijacked brands were financial companies.



m a r k e t p l a c e

Dell Retains Top Spot In U.S. PC Sales

A preliminary report from Gartner, a technology research and analysis firm, shows that while worldwide sales of PCs grew 10% in the first quarter of 2005, a stronger-than-anticipated growth, sales in the United States fell short of expectations for most PC manufacturers.

Dell, which retained its spot as the No. 1 seller of PCs in the United States and the world, saw a modest increase of 8.5% in its U.S. sales from a year ago. The biggest growth in the United States came from Apple, whose sales jumped 45.1% due in large part to consumers buying the iMac and PowerBook. Gartner reports that lower-priced notebooks drove U.S. sales in general.

Worldwide, almost 50.4 million PCs were sold in Q1 2005, up from 45.7 million in the same quarter of 2004.

Below are the top-selling PC manufacturers in the U.S. market for Q1 2005. The stats include desktop and portable PCs, as well as x86 servers.

Manufacturer	Units Shipped	Market Share	Growth Rate (from Q1 '04 to Q1 '05)
Dell	4,870,000	32.0	8.5
HP	2,620,000	17.2	3.3
Gateway	826,000	5.4	-23.4
IBM	623,000	4.1	1.7
Apple	571,000	3.7	45.1
Others	5,728,000	37.6	-1.1

Top-Selling DVD Brands

A survey of February sales of DVD players shows Sony solidly at the top of the list of best-selling brands in the U.S. market.

Manufacturer	Market Share (percentage)
Sony	12.5
Cyberhome	9.9
Samsung	9.6
Toshiba	7.2
Sylvania	6.5

Source: The NPD Group/NPD Techworld

tidbits

Two-thirds of American households have at least one mobile phone, and households with at least four mobile phones have grown 57% in the last year. However, consumers' satisfaction with their mobile phone carriers in areas such as call dependability and customer service is only about 50%, having declined in each of the last three years.

Source: Forrester Research

2008

Wireless email will be a built-in feature on all smartphones by the end of 2008, according to Gartner, a leading information technology research and analysis firm.

Source: Gartner

As the decade expires, some 20 million U.S. households will be subscribing to satellite radio, according to Forrester Research. (In 2004 4.5 million Americans subscribed to satellite radio, an increase of 150% from 2003.) The company also predicts that more than 12.3 million households will be using MP3 players to tune in to audio podcasts.

Source: Forrester Research

28% of people with personal email accounts claim they are receiving more spam than a year ago, when the CAN-SPAM Act was signed into law. 22% report they are getting fewer spam emails.

Source: Pew Internet & American Life Project

2009

By 2009 more than 30 million wireless subscribers in the United States will access commercial TV and video content on their mobile phones, predicts IDC, an information technology advisory firm.

Source: IDC

Denon's philosophy is simple.

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you're
innovating
or
you're
imitating.

Introducing Denon's New AVR-5805

The World's First 10-channel A/V Receiver With Fully Configurable 4-zone Capabilities

A Breakthrough In Multi-source, Multi-zone Flexibility

For the home entertainment enthusiast and custom installer alike, Denon's new AVR-5805 delivers unprecedented four-zone home entertainment integration and control — all from a single component. With 10 configurable and discrete amplifiers, 16-channels of audio output, and the world's first-ever ability to drive two fully independent 5.1 systems, the AVR-5805 will also route audio and video signals from up to four independent sources and distribute them to up to four separate zones throughout the home. Its advanced capabilities even allow discrete power, source selection and volume control of each zone. And flexibility is just the beginning. Read on.

Masterful Technologies And A "Sweet Spot" For Every Listener

Behind the AVR-5805's newly designed, easy-to-read front panel display is a profusion of powerful technologies. An Equal Power amplifier section delivers a massive 170 watts of high-current power into each of its ten channels, processing for every popular 7.1-, 6.1- and 5.1-channel surround sound format — from Dolby (including Pro Logic IIx) and dts, to THX Ultra2 and THX Surround EX. The AVR-5805 also introduces the latest in Auto Setup Calibration and Equalization with the Audyssey MultEQ$_{XT}$ system, tailoring sound not only to the listening environment but also to the audience. This advanced technology analyzes and calibrates six critical settings including variable crossover point detection. It also determines the correct frequency response for up to six separate listener positions and then averages all six. The result? Literally a "sweet spot" for every listener in the room.

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The AVR-5805 offers a full complement of advanced processing capabilities like HDMI/DVI digital video selection, video up-scaling (including Faroudja DCDi technology for analog sources) and the world's first dual, independent video conversion for unmatched simplicity and the highest picture quality from all your video gear. For even greater A/V performance, it employs the most advanced Texas Instruments' and Analog Devices' 32-bit DSP processors, Burr-Brown 24-bit/192kHz audio DACs, as well as Denon's newly improved DDSC-D (Dynamic Discrete Surround Decoder-Digital). And to top it off, exclusive Advanced AL24 Processing Plus circuitry maximizes all source signals so that the high-resolution DA converters work at peak capacity.

More Connection Options Than Any Receiver In The Industry

In addition to an extensive complement of digital and analog A/V connections, the AVR-5805 includes a full array of "custom installation" features: assignable high amperage DC trigger outputs, dual RS-232C ports to facilitate integrated system and PC connectivity, and a built-in Ethernet port that adds more system control as well as future updates and upgrades. In-demand connection options include 6 high-bandwidth (100 MHz,) HDTV-compatible component video inputs, HD switching for 2 zones and much more. Finally, the latest version of Denon Link 3 and dual IEEE-1394 inputs allow for reception of high-resolution, multi-channel digital audio data directly from compatibly equipped DVD players. It all adds up to total flexibility and the ultimate level of sonic performance. Denon does it again.

DENON

The First Name in Digital Audio

BY GREGORY ANDERSON

shelfwatch

We're all about convenience. We can't get enough of products that make electronics easier and quicker, so we can quit fiddling with the knobs and get on with our lives. The items in this month's lineup do just that.

iRobot Roomba Pink Ribbon Edition

$180

www.irobotstore.com

Talk about convenient: The Roomba robotic floor vacuum roams your rooms picking up dirt, dust, and other debris. It senses walls and other obstacles, calculates the best pattern to cover a room, and holds a charge for two hours. While you keep your place clean, you're also supporting breast cancer research: 20% of each sale goes to the Susan G. Komen Breast Cancer Foundation (www.komen.org) to search for a cure.

Toshiba RD-XS34 Combination DVR/DVD Recorder

$499

www.toshiba.com

Does your TiVo fill up with "Design On A Dime" and "Antiques Roadshow" faster than you can keep up? Wouldn't you love to combine all those recorded episodes of "Dora The Explorer" onto one DVD the kids could watch somewhere else? Toshiba's latest combination unit includes a 160GB hard drive (enough for 135 hours of programming) for storing TV shows, *TV Guide*'s free electronic programming guide service for scheduling, and a DVD-R/RW recorder for archiving shows to disc.

Philips WACS700 Wireless Music Center

$999 main unit, $299 satellites

www.consumer.philips.com

Equip your entire home or office for sound without running a single wire. Control the base unit and up to five satellite speaker units independently, or synchronize the whole system. The Wireless Music Center operates on its own network, which can connect to your PC's network for streaming files, and includes a CD player and hard drive to store about 750 of your favorite discs.

Samsung HL-R5067W DLP Television

$2,999

www.samsung.com

Are stylish, slim, and affordable at the top of your TV criteria? Then a model with DLP (digital light processing) technology is right up your alley. Samsung's latest 50-inch model offers a space-saving shelf design (from which you can also separate the television), high-def resolution, and a built-in HDTV tuner (eliminating at least one extra box). The best part? It costs about half what you'd pay for comparable plasma or LCD models.

Panasonic DMC-LZ2 Digital Camera

$299.95

www.panasonic.com

It had to happen eventually—you got everyone to soccer on time but forgot the camera's memory card in the bustle. Panasonic's new Lumix, with its 14MB of memory, lets you leave home without sweating the small stuff. That's enough to store 11 to 40 shots (depending on image quality) without any memory card. And the 5MP (megapixel) sensor and 6X optical zoom (with optical image stabilization) make sure those team photos are worth storing.

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Digital Audio

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Compiled by Sean Doolittle

Get Off My Case Laptop Tote
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According to Melissa Beth Designs, "The Get Off My Case tote will totally keep you from falling asleep at your next bored meeting." A velour exterior, leather trim, and patterned interior liner add major snazz to this basic laptop case. Teflon-treated fabric adds stain resistance. Also available in pink (polka dot interior), turquoise (floral interior), orchard green (powder-blue striped interior), and navy (candystripe interior).

Kate Spade iPod Case
$55 • www.neimanmarcus.com

Who needs to be sold on a Kate Spade bag? This one, for your iPod mini, features border-stitched leather, a clear plastic shield, and a wrist loop on a gold metal ring. Also available in pink/green leather.

Betsey Johnson Mobile By Samsung
$249.99 with new service plan
www.betseyjohnsonbysamsung.com

New York designer Betsey Johnson began establishing herself in the Warhol 1960s. Now, Samsung T-Mobile brings Betsey's trademark style to the latest in its line of fashion camera phones. According to Samsung, "This designer original features sugar, spice, and 15 seconds of video." You can upload your favorite tunes to use as ringtones and send Instant Messages during the quiet times. A matching rosebud purse, also designed by Johnson, completes the look.

Barbara K! Power Lite Cordless Drill
$49.99 • www.barbarak.com

Single working mother and former New York City general contractor Barbara K puts the power tools in empowerment with her line of no-nonsense hardware for DIY-minded women. Take the Power Lite Cordless drill: It's plenty heavy-duty (12 volts, variable speed, keyless chuck), but you can detach the battery and wear it on your hip, making the drill lighter in your hand. The ergonomic design also lends increased control during use. Take a walk, Tim Allen.

Shopping Site Of The Month

My Virtual Model

www.mvm.com

One of my biggest concerns when buying clothes online is the ever-looming question of whether they will fit. I'm left completely befuddled as to what size to choose because there aren't standard sizes among brands of clothes. I could be a 10 at one store, an 8 at the next, and a 12 at another.

I have often thought about how convenient it would be if I could try on clothes virtually before buying them online or enter my body's measurements and have the store's Web site tell me exactly what size I need. Lucky for me, My Virtual Model lets me try on clothes using a model that looks like me. I can customize her body shape, waist, height, weight, eyes, nose, lips, skin color, hairstyle, and hair color so I can get the most accurate picture of what the clothes would look like on me.

My Virtual Model lets me take my customized model to many stores, including Sears, Lands' End, L.L. Bean, the Home Shopping Network, and more, to try on clothes. Some of these stores' Web sites, such as Sears and Lands' End, even let me enter my measurements to get recommendations on the best size and fit for the clothes I tried on using the My Virtual Model Fit feature. Best of all, these features are free. All you need is a compatible Internet browser and Java capabilities.

Try Something New

After I created my virtual model, I went shopping at a few stores. I couldn't combine a shirt from L.L. Bean with a pair of pants from Sears, but I could combine multiple items from the same store to create some pretty cool outfits and buy the ensembles directly through the retailer's Web site.

Although I would never be seen wearing some of the outfits I tried on my model (such as a teal skirt and top that made me look like I gained 15 pounds), others were really cool. One combination I particularly liked was a leopard print skirt and lace top with some great boots and a coordinating handbag. I wouldn't normally try on leopard print in real life, but it looked so great on the model that, in the future, I may include this style in my wardrobe.

And when I finally find clothes that look good on me in the size I need them, I can worry about other things, such as how to redecorate my bedroom. Sears and Lands' End let me use the My Virtual Model features to virtually redecorate a room. I can also use My Virtual Model to visualize weight loss at NutriSystem.com or create a doll that looks like a child I know at My Twinn.

Lose The Guesswork

Using your model while shopping on the Internet can take a lot of the guesswork out of online clothes shopping. Check it out; you may discover a new favorite way to shop for clothes or a new style for your next evening out. ce

BY JENNIFER JOHNSON

Relax

Entertain

Romance

In the Mood?

Entertaining? Relaxing? Romancing? Whatever life brings,
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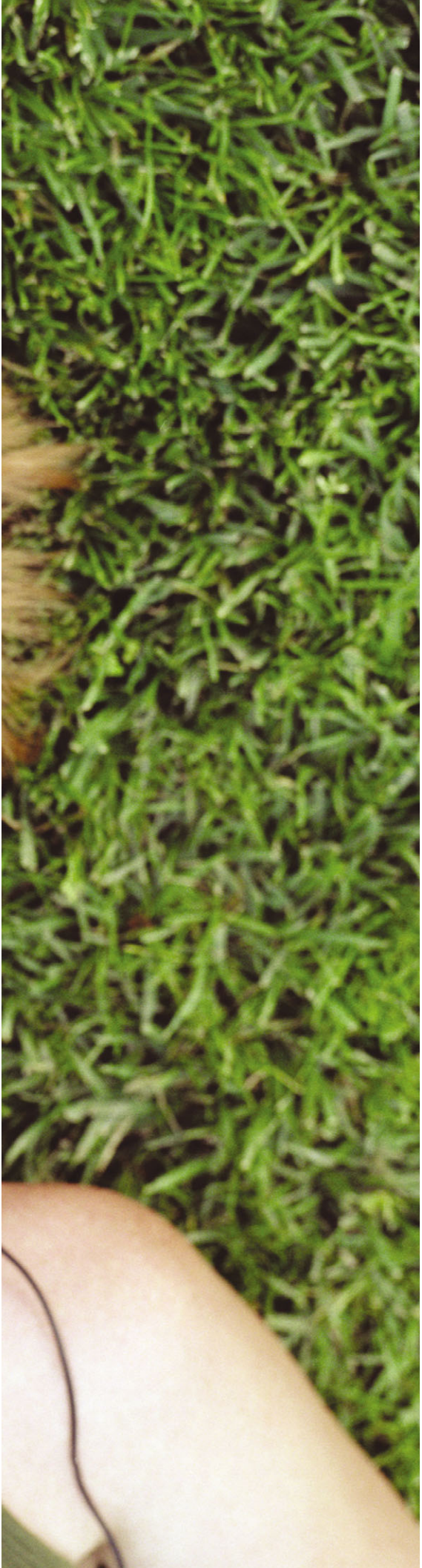

Xdrive

Play Your Music Collection On Your Phone

Portable MP3 players, especially Apple's iPod, have established a niche in our mobile society. However, MP3 or CD players are not the only devices you can use to access your music collection while out and about. Xdrive (www.xdrive.com), an online service that provides remote access to your files, word-processing documents, and photos from almost any computer, recently launched a service that lets you stream music files to your cell phone over a wireless Internet connection. If you have the right equipment, download the appropriate software, and subscribe to Xdrive, you can use your Internet-enabled mobile phone to enjoy music anywhere, anytime without having to purchase an iPod or other portable music player.

Prepare To Play Your Music

It doesn't take long to realize that trying to carry a cell phone, MP3 player, PDA, and possibly additional devices in your purse can turn into quite the juggling act. Removing even one of these items can make life easier (and your purse lighter!) during your busy day. With Xdrive you can leave your portable MP3 player at home and use your cell phone to hear your favorite music.

To use Xdrive with your cell phone, you need a mobile phone that can stream music over a wireless connection from your Xdrive account. The only fully tested and supported phones at press time are the palmOne Treo 600 ($299; www.palmone.com) and 650 ($449). The Treo 650 is currently available from Cingular, Sprint, and Verizon Wireless, while Sprint, Cingular, T-Mobile, and Verizon Wireless offer the Treo 600.

Your cell phone also needs media player software that can handle M3U playlist files, which are text files that point your device to the location of the music files you want your media player to stream. Xdrive recommends Pocket Tunes Deluxe from NormSoft ($27.95; www.pocket-tunes.com). Pocket Tunes is a music player for Palm OS devices that can handle music files in MP3, WMA (Windows Media Audio), and Ogg Vorbis formats, either on a memory expansion card in the device or over a wireless Internet connection. This software requires you to use a PalmOS 5.2 or higher device with 450KB of free memory, though at least 700KB of memory is recommended if you would like to load the optional plug-ins or graphical skin interfaces for Pocket Tunes.

Once you have a compatible phone and software, you need a subscription to the Xdrive online service. You can subscribe to one of two Xdrive Plus subscription options: Xdrive Basic and Xdrive Professional. A Basic membership provides 5GB of space for $9.95 per month. If you need more space, Professional memberships with 10GB of space are available for $19.90 per month. You can choose to pay by credit card either monthly or annually. With an annual payment plan, you get two months of free service for either membership (it costs $99.50 annually for a Basic subscription and $199 for Professional).

Xdrive offers a free 15-day trial of either Xdrive Plus service, so you can determine how much storage space you need. If you decide later that you need less or more storage space than your subscription provides, you can change your membership at the end of the billing cycle or have Xdrive prorate your monthly or annual charge.

Set Up The Service

Xdrive is easy to use, but you must set up your service before you can stream music to your mobile phone. The first step is to convert your music into digital format. For most people this means downloading MP3 files from the Internet or using software to rip selections from a CD collection into a digital format such as MP3. If you have ripped files to use with another player before, you might need to rerip the music from your CDs because streaming music over a mobile phone network requires that you use a lower bit rate such as 48Kbps (kilobits per second) than you need for listening to music files on your computer. The **bit rate** is the rate at which you record MP3 files. Lower bit rates strip more information from the original audio file. This causes the file to have lower quality sound than a file transferred at, say 128Kbps, which is similar to CD-quality sound. Xdrive support recommends you use 48Kbps for streaming music on a mobile phone. However, the exact setting will vary according to the cellular network speed and coverage in your area; if you have a newer phone with excellent service, you can try a higher bit rate.

After you have your music files ready to upload, go to the Xdrive Web site to set up an account (with a username and password) and choose your subscription. You will need a credit card (even if you are trying the free 15-day trial) so that Xdrive can bill you for your subscription without interrupting your service after the 15-day trial has expired (if you don't cancel before then).

Once you set up your account and are logged in, you can set your Xdrive account to access your music through Pocket Tunes on your cell phone instead of your PC's music player. In the top-right corner of the screen that comes up after you log in, you'll see a small box marked Launch Xdrive. Click that checkbox, and a small window will pop up over your browser. It looks similar to a Windows Explorer window, with a list of directories on the left, a list of files on the right, and several tabs at the top. Click My Account and then scroll down to General Preferences. Click the Edit button to the right and remove the check from the Use Xdrive Media Player option. Then, click the Update button.

Now you are ready to upload your music files. Click the Upload button on the far left side of the button bar in your Xdrive window, and you will be presented with two options: Basic Upload or Upload Accelerator. Basic Upload lets you select one file at a time and add it to your upload queue, while the Upload Accelerator offers advanced options such as the ability to upload entire folders. The accelerated mode also compresses files before you upload to reduce the amount of time it takes for the transfer and automatically restarts your song transfer if the process gets interrupted. If you want to upload your entire collection, you should consider using the Upload Accelerator.

When the upload is complete, go back to the page you saw right after you logged in and click My Xdrive on the left side. You should see a list of the music

Xdrive Drawbacks

The monthly subscription fee for the Xdrive service is low, starting at $9.95, but you must also pay the data charges from your mobile service provider. Some wireless services offer plans that include unlimited access to the Internet in addition to your talk time minutes, but some plans charge for talk time and per-minute usage for Internet access. Rates can vary widely from carrier to carrier and from area to area, so check with your service provider up front to find out what the potential charges for data transfer could be using your cell phone plan. This will save you the grief of having to pay a shockingly expensive phone bill because you streamed music on your phone before researching the cost.

Because this is a mobile service, there may be times when wireless service is not available; therefore, you may not be able to access your playlist.

You may sometimes see a "buffering" message from Pocket Tunes while the phone retrieves your music file, which can cause noticeable gaps in playback. You may also notice a slightly lower sound quality than you're used to because you had to rip your music files at a lower bit rate than CD-quality sound to reduce file sizes and improve network performance. ●

Let The Music Begin

As technology advances and more areas connect to a solid mobile phone network, more cell phones and programs will develop to help you listen to clear music on your cell phone. Xdrive already provides this service and doesn't require much to get you started. Here is all you need to stream music through your phone using Xdrive:

- Treo 600 or Treo 650
- Media player software, such as Pocket Tunes Deluxe
- A computer for downloading your playlist
- Software, such as Quick Install, or a memory expansion card to get your playlist from your computer to your phone
- Monthly or annual subscription to the Xdrive service through its Web site

files you uploaded in the right pane. If you don't see that list on the right, move your files from the root directory (My Xdrive in the folder list on the left side of your screen) into the My Music folder by selecting the checkbox to the left of each file name, then clicking the Move button in the button bar at the top of the window, and selecting the destination folder from the list of folders on the left side of the window.

After all of your music files are in the My Music folder, create a playlist for your music files. First, select the songs you want to hear and then click the View button in the button bar. This will create an M3U playlist file that you will need to download and install onto your mobile phone. Before the list can reach your phone, you must download the playlist to your computer. Depending on your Internet browser, the file may download immediately when you click the View button. If not, your browser will prompt you for a filename and directory in which to save the file.

After you have downloaded the playlist to your desktop computer, you can use the palmOne Quick Install tool to transfer it to your Treo smartphone. If you have set up your Treo to sync with your computer, you already have the Quick Install Tool. Double-click the files you want to send to your phone. The Quick Install Tool will transfer them to your phone the next time you perform a HotSync. Alternately, you can copy the file from your computer to a memory card that plugs directly into the Treo and then use a file utility such as FileMan ($12; www.bitsnbolts.com) to copy the file from the expansion card to your Treo smartphone.

It is important to note here that you are not transferring the music files themselves to your phone, but only playlists that contain "pointers" to your Xdrive account and the songs you already uploaded and added to that playlist. If you want to add more music later, you will need to upload an entire revised playlist to your Treo instead of adding only one or two new songs.

Using your Treo 600 or 650, you can start playing music by launching the Pocket Tunes application. Pocket Tunes is in the RAM on the Treo; launch it by tapping the stylus on the application icon in the Treo's launcher. Then, select a playlist. If the phone is not currently connected to the Internet, you may see a dialog box asking if it's OK for the phone to connect (unless you have already set your phone to connect when an application requests to connect to the Internet). Tap Yes, and the phone will connect to the Internet; the selected playlist will start playing immediately. You can use the built-in speaker on the Treo, or for better sound quality, plug in a set of headphones.

Stream Music Anywhere, Anytime

Using Xdrive to stream music on your mobile phone is a fun and convenient way to access your music library on the go without having to purchase a separate MP3 player. For as little as $9.95 a month, plus phone charges (see the "Xdrive Drawbacks" sidebar for more details), you can have your music available anytime and anywhere that you have your phone.

After the setup process and initial upload, you can access your music with a couple of taps on your palmOne Treo 600 or Treo 650. The sound quality isn't quite as good as what you would expect from a dedicated device, but for many, the convenience of listening to music with your phone instead of juggling multiple devices outweighs the drawbacks.

BY JEN EDWARDS

Grand, But Not Two Grand

You Can Have Superb Audio For Under $2,000

Two thousand dollars. Not much when it comes to many products, but it's still a lot when it comes to buying audio. Sure, you can spend many multiples of that figure when you shop for your dream stereo system, but you don't have to. All you need is a guide to what to look for (or more importantly what to listen for) and you can shop intelligently with great results.

As you work your way through the product categories, remember that audio systems depend not just on one component but on all of them put together. The most wonderful speakers on the planet can't save your music if any one of your other components (CD player, turntable, amplifier, equalizer, or even your wires or their connectors) isn't doing its job. When it comes to audio, the whole is very much more than the sum of its parts.

What To Buy For $2,000

First, a disclaimer. If we had this entire magazine to work with, we still couldn't begin to cover all the possible combinations of worthwhile components you can get for $2,000 or less on your way to an excellent audio system. Every audio vendor we talked

to, except a couple who sold *only* the most expensive equipment, said essentially the same thing when first consulted: For $2,000, you can get a superb package, and the list of possible products is virtually endless.

What we have here are some strong suggestions in each of the major categories. Our recommendations are not necessarily meant to assist you as you run out and buy particular brands and products, but more to give you and your dealer an overview of the quality you're hoping to find.

Speakers

That said, you simply can't have a good audio system without good speakers. Of the $2,000 at your disposal, plan to spend at least 40%, and possibly 60%, on your speaker system. Speakers perform the crucial function of converting the electrical signals from your audio source into sound waves our ears can detect and process. Obviously, the richer the quality of those sound waves, the better the reproduction of the sound. Ideally, speakers will reproduce sound frequencies as close as possible to the audible range in human hearing (between 20 and 20,000Hz). When you're shopping for speakers, keep that range firmly in mind. Generally, the less expensive the speaker, the narrower the range it will reproduce, and the better the speaker ("better" often translates into "more expensive"), the more consistent the output along the widest possible range.

The other important choice when selecting speakers is the number of speakers in each cabinet. A one-way speaker has only one actual speaker, and it handles all frequencies. Two-way speakers, with two speakers per cabinet, split the upper frequencies and lower frequencies between the two speakers, allowing for a more specialized speaker for both functions. A common arrangement is the three-way speaker, with three speakers per cabinet: a large speaker (the woofer) handles the low (bass) frequencies, a much smaller speaker (the tweeter) takes care of the high (treble) frequencies, while a third speaker (known as the mid-range or mid) does the rest.

Audio Sources

At the other end of the chain is the audio source or sources. Although a CD player is fairly standard (to such a degree, in fact, that we offer recommendations in the table below), other possibilities include an MP3 player, DVD player, cassette deck, tuner, the good old turntable, or any combination thereof. These components tend to be distinguished more by features (such as the number of CDs you can place inside a CD changer or the use of playlists on the MP3 player) than by the quality of the signals they generate. That

Speaker Recommendations

Brand & Model	Price	URL	Comments
Aperion Intimus 522D-PT	$1,198 per pair	www.aperionaudio.com	Built-in 150-watt power amplifier to drive the contained subwoofer
Infinity BETA 50 CH	$999 per pair	www.infinitysystems.com	Innovative internal crossover technology reduces noise caused by resonance
Dali Suite 1.7	$1,050 per pair	www.dali.dk	Smaller than many floor-standing speakers, designed to fit easily into a room corner while still delivering strong bass response

Integrated Amplifier Recommendations

Brand & Model	Price	URL	Comments
Arcam A65Plus Integrated Amplifier	$599	www.arcam.co.uk	40 watts per channel continuous (RMS; root mean square) power means plenty of power to drive speakers
NAD C352 Stereo Integrated Amplifier	$599	www.nadelectronics.com	80 watts per channel continuous (RMS) power with preamp and power amp easily decoupled
Denon DRA-685 Receiver	$499.99	www.usa.denon.com	100 watts per channel continuous (RMS) power, AM/FM tuner, outputs for dual-zone audio

CD Player Recommendations

Brand & Model	Price	URL	Comments
NAD C542 CD Player	$499	www.nadelectronics.com	Top-notch tracking and timing, with support for HDCD (high-definition compatible digital) discs
Integra DBS 6.5 Universal Disc Player	$509	www.integrahometheater.com	Plays all current formats of audio and video files on whatever disc you place inside
Arcam CD73T CD Player	$699	www.arcam.co.uk	Extremely low noise, excellent sound detail, 24-bit digital-audio conversion for high-quality reproduction

said, the heads on your cassette deck are certainly something in which to invest more money, as are the cartridge and stylus for your turntable. These elements affect sound reproduction considerably.

Amplifiers & Receivers

Between the source(s) and the speakers lie several technologies. All stereo systems use at least two: the preamplifier (control amplifier) and the power amplifier. The preamp controls your system, taking signals from various audio sources and readying the signals for amplification by the power amp. One of the preamp's tasks, for example, is to increase weak signal that come from turntables; another is to buffer signals to provide continuous sound. The power amp boosts the signal from the preamp to a level sufficient to drive the speakers. The stronger the power amp, the greater the boost, and the greater the speakers' efficiency, the more effective this boost becomes. Often packaged with the preamp and power amp is a radio tuner, the combination is typically referred to as a receiver. In addition, this package can contain an equalizer, letting you alter the mix of frequencies to your liking, but the best-designed stereo systems need very little if any equalization at all.

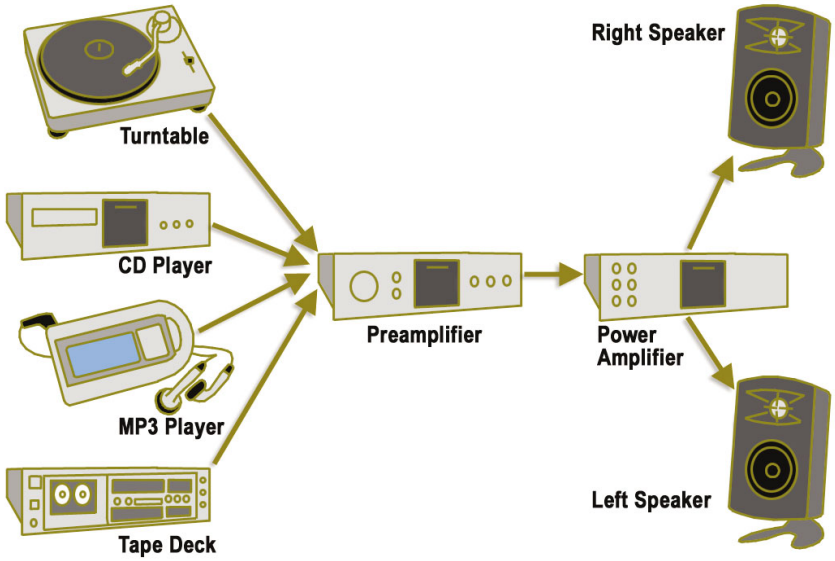

Figure 1: A basic stereo system set up.

Wires & Cables

Components are connected by wires (also known as cables). RCA cables, also called interconnects, connect the audio sources to the preamplifier (whether or not the preamp is part of a receiver). Speaker wires run from the speaker connectors on the amplifier to the speakers themselves, where they either plug into the input jack or fasten onto a connecting screw. On inexpensive stereos, usually single-piece units, the speaker wires are sometimes attached directly to the speaker, with no input jacks available.

Connecting Components

To understand how to connect everything together, it can help to visualize the system in its component parts, along with the connections between them.

The system above in Figure 1 is a basic setup. If you have a standalone equalizer, it will fit between the preamp and the power amp, and if you have surround sound speakers (five-way, for example), you'll have a different speaker setup. If your speaker system includes one or more subwoofers, they, too, would require separate hook-ups. You'll often see subwoofers in a corner of the room or, if there are two, one beneath each main speaker cabinet.

One other point about the diagram: It separates the preamp and power amp. Move these two components together in one unit, and you have an integrated

Splurge On Speaker Wire!

After spending all your cash on the major components, you'll understandably be tempted to opt for the least expensive minor components. Don't. Your entire stereo is only as good as its weakest link. Speaker wire is one of these items, and you should consider reserving some serious money back for it.

Using excellent speaker wire gives you the best possible musical detail. Speaker wire is graded by an AWG (American Wire Gauge) number—the lower the number, the thicker the gauge, and the thicker the gauge, the better the wire. For most stereo systems with speakers less than 60 to 80 feet from the amplifier, 16-gauge wire will do. The 14-gauge wire handles distances between 160 and 200 feet, while 12-gauge wire is best for longer distances. Thicker wire is better because it offers less resistance, so a stronger signal gets to the speakers.

Here are three brands we recommend. The prices are per cable, and you'll need two for your stereo system.

Monster Cable (www.monstercable.ca). $1.25 per foot for 18-gauge, Monster Cable Navajo for $1.60 per foot. Both with termination included.

Cable Pro Insight (www.thecablepro.com). $20.50 for the first foot (16-gauge) with terminators, $4.50 per additional foot.

Canare 4S11 (www.canare.com). $2.00 to $2.50 per foot for 14-gauge, $1.50+ for 12-gauge. No terminations included.

Train Your Ears

For $2,000, you deserve to know what you're getting. To that end, why not spend a bit of time teaching your ears what to listen for as you head out to the audio shops for demonstrations. Gather four or five of your favorite CDs, ideally with differing musical styles. Now, before you go shopping, listen to these CDs on your current stereo: Sit down and focus your attention on the music. Try to pick out as many different musical elements as you can. Among them are these:

Drums

Adjust the tone controls (or equalizer) to make the drums come to the "front" of the sound, where you can hear the crispness of the snares, the thud of the bass drum, and the higher thunk of the tom-toms.

Voice

Listen for realism in vocal textures. It also has resonance and depth, and it has to sound human. Sing to yourself, listen to the sounds your voice makes, and find compelling vocal passages on your CDs to test at the store.

Bass

Bass guitars (or bass instruments in orchestras) form the bottom end of sound, without which everything would sound remarkably shallow. Try to find a track that emphasizes bass lines (if you're into the Beatles, "Penny Lane" or "Something" are perfect for this, and if you're into jazz, any "walking" bass line will do) and listen to the speakers as they try to reproduce the full range of notes.

Piano

This difficult-to-record instrument runs across the spectrum of musical genres. Try to hear its broad dynamic range but listen for crispness of reproduction. If you have access to a real piano, press the keys lightly and then firmly to hear the difference and find passages on the CDs that demonstrate both.

The High End

This is often the most neglected range. It covers obvious high-frequency instruments, such as violins, flutes, and mandolins, and also the highest notes on the piano and the variety of percussion up there at the top: cymbals, high-hats, triangles, bells, etc. Turn the bass and midrange way down and train yourself to hear what's happening way up top.

Guitar

The staple of rock, folk, and pop music, guitars have numerous sounds. Acoustic guitars should have a bright ring when strummed, a crisp but rolling smoothness when fingerpicked, and a sharpness when played as a lead instrument. In power pop and metal, they should dominate the midrange; use your equalizer to cut as much of the rest of the music as possible so that the guitars dominate.

When you get into the store, listen to what the salesperson wants you to hear, keeping your training in mind. Insist on hearing the system with all tone controls and equalization at their "flat" levels—that is, with everything set to zero. A good stereo will reproduce the full range of sounds at these flat levels and let you pick out everything from the lowest bass to the highest trebles. If something sounds muted or buried, try a different CD (sometimes the recording is at fault), and if it keeps happening, move on to a different system. Don't stop until you get one that plays all ranges consistently well.

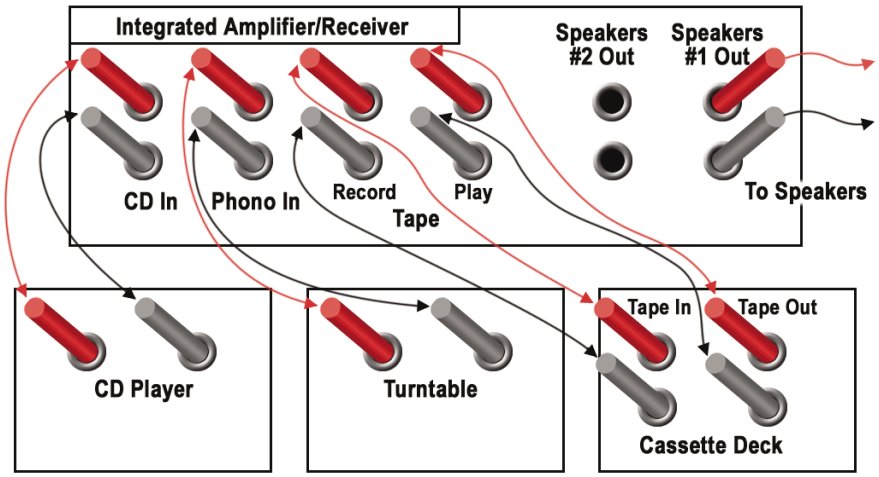

Figure 2: Typical cable connections.

amplifier. Add a tuner and you have a receiver. Here, the main point is that, even if they're separate, they're easy to connect using standard interconnect cables.

It's the rest of the system that requires time and thought to put together. The labels for the various ports aren't standard, so you have to dig in the manuals to know what to plug where. Make sure cables emerging from output jacks on one component connect to the input jacks of the next component in the line. Try to think, as you go along, of the path the music must take: It has to get out of the audio source, into the speakers, by way of the amplifier. Figure 2 shows how the cables typically connect.

What's Wrong With An All-In-One?

All-in-one stereos (mini, shelf, and compact stereos) combine all of the necessary components into one unit, although usually the speakers detach so you can place them where you wish. A perfect example is the Sony Desktop Micro System with 5-Disc CD Changer ($179; www.sonystyle.com). It includes all of the following in a 10-inch high x 16-inch wide x 7-inch deep package:

- 3-way stereo speakers
- 5-disc CD changer that plays CD/R, CD/RW, and MP3s in addition to standard audio discs
- Cassette tape deck that synchronizes with CD recording
- AM/FM tuner with numerous presets
- Remote control

They're great for some purposes: a teenager's bedroom or a college dorm room, a kitchen or mud room that doesn't have a system connected to the rest of the house, or a small office. The problem is that their amplifiers are underpowered for high-quality reproduction, and the speakers can't compete with those in the price range in this article. Dynamic range is lower and power capacity is lower, and the result is a system that will play music best on relatively low volume. Crank up the juice, and you get clipping, distortion, and lack of balance among the frequencies. Because of these limitations, many of these systems often include 3- or 5-channel equalizers that let you cover the system's deficiencies.

At the end of each cable is an RCA connector or plug; each fits into an RCA opening or jack on the components. In Figure 2, the CD player has a stereo output pair of connectors that plug into the CD input jacks on the receiver. There are no CD outputs on the receiver or CD inputs on the CD players, but there will be on a CD recorder. If you have a turntable, plug the connectors into the phono inputs because the preamplifer needs to boost the phono signal before your amplifier can power the speakers. The cassette deck here has input and output cables, letting you record and play back your tapes.

Typically, the ends are color-coded so the correct plug goes in the correct jack, ensuring that you don't cross positive and negative connections (which would decrease signal strength). If they're not color-coded, run left to left and right to right by following the length of the wire as you connect each end.

The receiver in Figure 2 has a simple speaker configuration, offering connections to two pairs of stereo speakers. As you shop, you'll find many configurations, depending on the capabilities of the amplifier for additional speakers (including surround-sound). You'll discover additional input connectors, including digital interconnects, such as BNC (Bayonet Neill-Concelman) and XLR (code X with Latch and Rubber), but only in high-end audio environments.

No question: $2,000 will get you a superb stereo system. Find a good audio store, spend enough time to get to know the sales staff, tell them you have $1,500 to spend (to give them some room to play), and let them try to sell you stuff. Listen closely and critically and make sure they know this purchase is extremely important to you. Don't settle for anything less than what satisfies you. For two grand, you don't have to.

By Neil Randall

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tips Organize Your DVDs

1 Choose A Case

If you need to take your entire collection of DVDs to a friend's house, consider a zipper case, sometimes called a CD/DVD wallet. The case has plastic pockets to protect your discs, and they can hold dozens to hundreds of DVDs. If you only need to take a few movies with you, carry each in a thin, plastic jewel case to fit more DVDs into your purse or bag than you could have by using their original cases.

2 Use A Bookshelf

Instead of buying a new storage component for your DVDs, line them up on a shelf of one of your bookcases. If you want something new that coordinates with your existing furniture, you can buy a bookcase or cabinet of any size to fit your storage needs. Some come with doors that you can close to hide your DVDs to ensure that the furniture blends well with the rest of your décor.

3 Try A Tower Or Rack

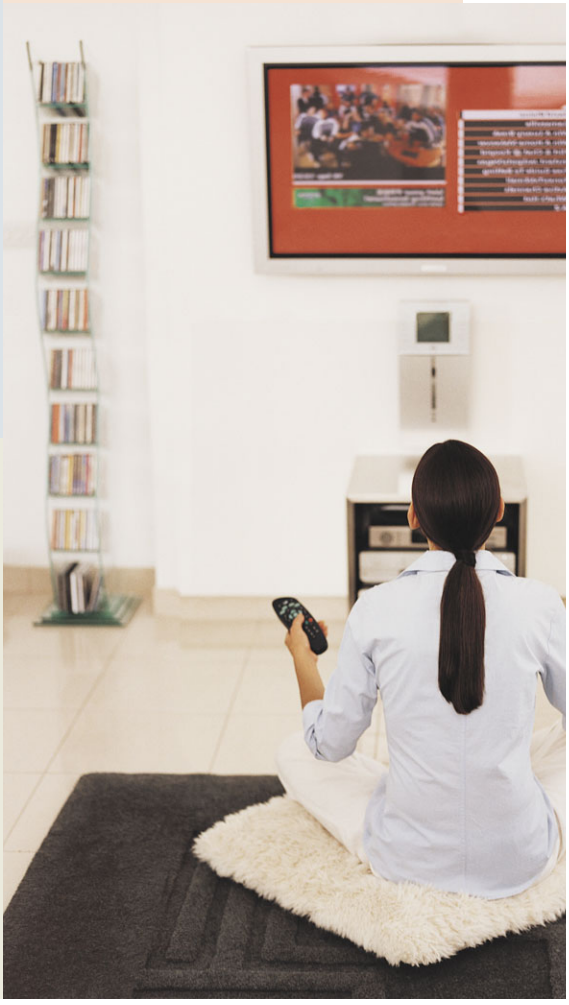
For a storage option that displays many DVDs, shop for a DVD tower. They come in a variety of styles and colors, from cherry wood to sleek-looking black and silver, and hold dozens of movies. Each DVD in a tower has its own slot, and you can easily read the DVD's title on the edge of its original case. If you have a small collection of DVDs, a DVD rack may work for you. Again, each DVD has its own slot, and you can easily set this rack next to your entertainment center, on an end table in your living room, or on your computer desk for easy access wherever you like to watch movies.

4 Alphabetize Or Categorize

Nothing is more frustrating when you want to watch your favorite movie than not being able to find it among the other hundred that you own. The easiest way to track down a DVD title is by alphabetizing your collection. No matter how many movies you have, you'll be able to find your choice in seconds. Another option is to group your movies by category, as movie rental stores arrange theirs. Organize all of your comedies, horror films, romantic classics, and others into groups that you would commonly associate with each movie.

5 Plan For New Additions

A storage technique, such as a bookcase, lets you easily rearrange your DVDs by simply sliding a new DVD into its place on the shelf. With this type of storage, you won't have to reorganize each time you buy a new DVD. With a tower or case, inserting a new DVD into its appropriate category isn't as easy because each DVD has its own slot. Leave a couple of extra tower slots or case pockets for new additions when you originally organize your movies so you won't have to reorganize your collection until you fill all the slots for a category or letter.

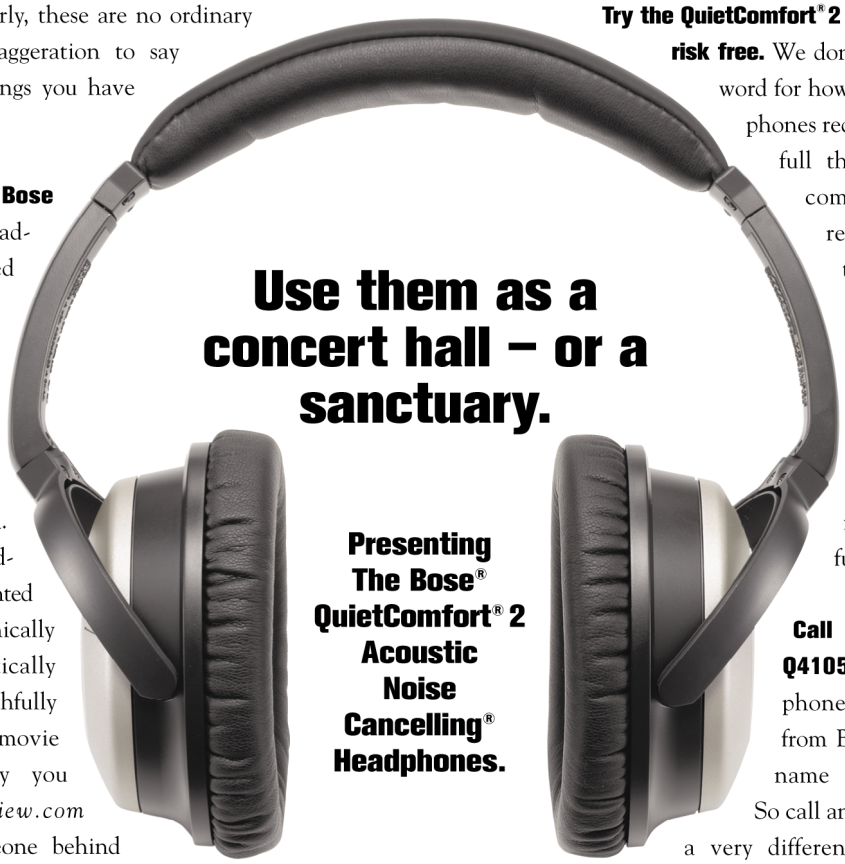


BY JENNIFER SUGGIT

Think of them as a reprieve from the world around you. Whether it's the engine roar inside an airplane cabin, the bustle of the city or the distractions in the office, Bose QuietComfort® 2 headphones help them fade softly into the background. And they do it with the flick of a switch. You can savor the delicate musical nuances without disturbing others. And when you're not listening to music, you can slip into a tranquil haven – where you can relax and enjoy peace and solitude. Clearly, these are no ordinary headphones. It's no exaggeration to say they're one of those things you have to experience to believe.

That's what columnist Rich Warren says. To enjoy peace and tranquility, simply turn them on. To add Bose quality sound, attach the included audio cord and connect them to a home stereo, laptop computer, portable CD/DVD/MP3 player or in-flight audio system. When you're done, their convenient fold-flat design allows for easy storage in the slim carrying case.

Use them as a concert hall – or a sanctuary.



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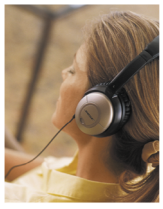
Reduce noise with Bose technology. Our headphones were designed primarily for airplane travelers. But owners soon started telling us how much they enjoy using them in other places to reduce distractions around them. QuietComfort® 2 headphones incorporate patented technology that electronically identifies and dramatically reduces noise, while faithfully preserving the music, movie dialogue or tranquility you desire. *Technologyreview.com* reports, "It's as if someone behind your back reached out, found the volume control of the world, and turned it way, way, down." Perfect for listening to music, whether you're on the go, at home or in the office.

Try the QuietComfort® 2 headphones for yourself risk free. We don't expect you to take our word for how dramatically these headphones reduce noise, how clean and full the audio sounds or how comfortably they fit. You really must experience them to believe it. Call toll free to try them for 30 days on your next trip, in your home or at the office – satisfaction guaranteed. If you aren't delighted, simply return them for a full refund.

Call 1-800-636-2073, ext. Q4105 today. These headphones are available directly from Bose – the most respected name in sound. So call and discover a very different kind of headphone – Bose QuietComfort® 2 Acoustic Noise Cancelling headphones.

FREE shipping with your order.

Enjoy your music with our best headphone sound quality ever. *CNET* says "All sorts of music – classical, rock, and jazz – sounded refined and natural." In fact, our QuietComfort® 2 headphones deliver audio that's so crisp and clear, you may find yourself discovering new subtleties in your music. *Travel & Leisure Golf* simply says, "Forget 'concertlike' comparisons; you'll think you're onstage with the band."



"The QuietComfort 2 lives up to its name, enveloping you in blissful sound… It's easy to forget they're on your head."

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Portable Sport Devices

Keep Your Workout Routine On Track

Every active woman needs a workout routine that is tailored specifically for her needs. Maybe you jog occasionally to stay in shape, run around to keep up with the kids, or take part in a more committed exercise routine. Whether you're training for a triathlon or simply want to ensure that you're a little healthier than you might otherwise be, measuring your exercise performance can help you reach your goals.

That's where sport devices, such as heart rate monitors, come in handy. Strap a small transmitter to your chest and a wristwatch-sized receiver to your wrist, and you can monitor your performance as you work out. When you're finished, download the data to your PC to keep track of your activities. Here's an overview of this and other portable sport devices that are both cool and useful.

Choose The Best Sport Device For You

The most appropriate device for you depends on your exercise goals, your preferred form or forms of exercise, and your budget. Those who want to count calories burned will benefit from using a device much different from that of the person who wants to ensure she is cycling efficiently. Women who wake up pumped and ready for a morning run will have different needs than those who

look forward to a day's hike in the mountains. Fortunately, there's something out there for everyone.

Heart rate monitors. A heart rate monitor is a good device to use while participating in a variety of sports, including running, cycling, and hiking. You strap a transmitter around your chest and a receiver on your wrist, and the device tells you what your heart rate is at each instant. The device might include other cool features, as well. Some notify you (via a certain sound or a visual signal) when your heart beats faster or slower than your target heart rate. You can hold some monitors in your hand. (We strongly prefer the ones that strap to your chest because they're easier to use and often offer more information about your workout.) Some store data and let you download that information to your PC. You can find a basic, yet respectable, heart rate monitor for less than $100 or much more advanced models for several hundred dollars.

For a standard but comprehensive heart rate monitor, consider the S410 ($229.99; www.polarusa.com) by Polar Electro. The receiver tracks your heart rate, includes a stopwatch, and lets you create exercise sets for interval training with target heart rate zones and recovery time calculation. When you're back at your desk, you can transfer your recorded data to your computer or create workout settings on your PC using Polar software and upload those workouts to the device.

If you're a bit more earnest about your exercise regimen, you might want to consider a device targeted toward serious and professional athletes. The Suunto X6HR ($469; www.suunto.com) features not only a heart rate monitor but an altimeter, barometer, and digital compass, and it comes with software that lets you download log files and sort them by altitude, date, duration, or other factors.

Tips: Shopping For Your Sport Devices

Try it on. Your comfort is crucial, so consider what the material in the device's strap and other parts are made of and test the device to see whether it chafes your skin.

Consider ease of use. Some sport devices are packed with useful features, but that often means they are packed with lots of buttons. You don't want to be fumbling with the device in the middle of your workout.

Don't overpay for unnecessary features. You can pick up a basic heart rate monitor for less than $100, so don't feel obliged to pay more for, say, the ability to download your data to a PC unless you expect to use it. ●

sport & GPS devices

Pedometers. If you're interested in a less intense type of workout, you might want to consider a pedometer. In their most simple form, pedometers sense your body movement and count your footsteps, and some translate the number of footsteps taken into distance covered. Pedometers can help you set goals to take a specific number of steps or walk a certain distance each day, and they can demonstrate with hard numbers how simple changes in routines (taking the stairs instead of the elevator) can significantly add up.

Most pedometers are more basic than the other types of devices covered here in terms of advanced tracking, but all of them count how many steps you take, and some measure calories burned, as well. Some also let you upload your workout information to your computer so you can track your progress toward reaching your goals.

For instance, the SportBrain iStep X ($119.80 [two pedometers in package]; www.sportbrain.com) lets you count steps, calories burned, mileage, and speed. When you're done exercising, you can plug the device into its mini USB cable. Then it sends data to your Web page where you can view your progress and compare your activity to that of others.

Cadence sensors. Cyclists know that, for optimum efficiency, it's important to keep a bicycle's wheels spinning quickly. Cadence sensors attach to your bike, and in addition to tracking your cadence, they often track current and average speed, mileage, and time. These devices usually come with two units: one that attaches somewhere on your wheel and senses your RPMs and another that attaches on your handlebars and displays what the sensor transmits. We found a number of cadence devices that also measured heart rate. When choosing a device, we recommend you first consider whether you want a wireless device (great for cycling, especially mountain biking) or a wired one, which is typically less expensive. Also investigate whether it lets you upload your data to a computer.

We like Vetta's V100 Series Wireless Cadence kit (around $110; www.vetta.com). The V100 displays performance data, including ride time; distance; and current, maximum, and average speeds.

Portable GPS devices. Another popular category of devices among hikers and other athletes is portable GPS (global positioning system) devices. These aren't the devices commonly used by boaters, orienteers, or even automobile drivers. Instead, they're wearable or handheld devices that include features for a wide array of exercise regimens. For instance, they can tell you how many miles you ran during your morning jog or help you find your way back to camp if you get lost hiking in the mountains.

For example, the Garmin Forerunner 301 ($324.98; www.garmin.com) includes software planning for workouts and a digital-coded heart rate monitor. It lets you map out your course so you can see how factors, including elevation, affect your performance.

Reach Your Goals . . . With A Little Help

Whether your exercise is a short walk or run around the neighborhood, a long bike ride through the countryside, or another challenging activity, portable sport devices can help you better measure your progress no matter what your goal. And if you ever get discouraged and think you aren't making as much progress as you'd like, these devices may just give you the incentive you need to keep going.

BY HEIDI V. ANDERSON

Understand Optimal Heart Rates

Before you start working out with a heart rate monitor, it's a wise idea to figure out your target heart rate range. There are plenty of guidelines out there. Some say that a woman should subtract her age from a specific number between 211 to 226 to determine her maximum heart rate. Then she should strive for her heart rate to maintain a percentage of that number during various portions of a workout, based on her workout type and goals. But one size does not fit all when it comes to an individual's ideal workout routine. We highly recommend you talk to a personal trainer or other qualified professional about your specific needs before you begin relying on a portable sports device.

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In either stereo or multichannel modes, the RBH excelled at producing a cleanly defined soundstage, with imaging uncluttered by any hint of a box or multiple drivers…The result is that the Compact Theater convincingly disappears as a sound source.
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Walkers & Runners

Let CE Help You Go The Distance

There's something indescribably intoxicating about the smell of slightly chilled air on a morning walk. Likewise, there's a certain satisfaction in hearing the gravel crunch between your shoes and the sidewalk because your jog through downtown happens long before the noisy rush-hour traffic. Even if you prefer afternoon or evening treks to early morning excursions, the idea of the road ahead as your only competitor gives running or walking a unique appeal.

Whether you are training for your first half-marathon or speed walking around the lake with your best friend to catch up on the latest happenings of your personal Wisteria Lane, there are a slew of gadgets that will measure the distance you've covered or help keep your heart rate within your target range. Depending on your workout goals, adding the right equipment can do anything from letting you know when you have walked 10,000 steps today to charting the progress you are making toward achieving your New Year's Resolution.

Pound The Pavement With A Pedometer

You have probably already seen this fact in scores of fitness magazines or online columns, but taking 10,000 steps every day is a healthy habit. Some of today's pedometers can do a great deal more than simply tell you how many steps you have taken. In fact, you can

Polar Electro has developed a line of HRMs that are ideal for those who enjoy running.

find several pedometers with useful bells and whistles that won't empty your wallet.

Oregon Scientific Digital Pedometer with Personal Safety Alarm. This pedometer ($29.95; www.oregonscientific.com) is a bottle of pepper spray away from being the ultimate personal-defense pedometer. Packing a 120-decibel (think power saw or rock concert) alarm, this pedometer is certainly capable of alerting others to any potential plight you encounter. In addition to the alarm, the Digital Pedometer with Personal Safety Alarm also has a HiGlo electro-luminescent backlight, which makes it an ideal choice if you favor twilight strolls or if your route takes you through less-than-savory locales in the evening. Other features include a built-in stopwatch that displays seconds/minutes/hours, a calorie counter, and user-definable stride distance.

SportBrain iStep X1. The SportBrain iStep X1's ($98.88 [package includes two pedometers]; www.sportbrain.com) digital smarts are what make it a smart buy. It gives you all the functions of a basic pedometer (step, calorie, and distance counters and an easy-to-read LED display), but its real value lies in its integrated USB interface.

The iStep X1 links with SportBrain's Web site (so you'll need a PC with Windows 98SE/2000/Me/XP and an Internet connection to realize the iStep X1's full value) to provide you with details about your exercise routine. When you register with SportBrain's Web site and connect the pedometer to your computer, the iStep X1 uploads data and creates data charts to map your workout progress, helping you consistently attain your goals. The iStep X1 may be a sensible choice for serious runners who want a better understanding of their performance.

Omron HJ-112 Premium Pedometer. If you hesitate to wear a pedometer throughout the day for fear of committing a fashion faux pas, Omron's HJ-112 Premium Pedometer ($29.95; www.omronhealthcare.com) might be a good choice. This pedometer may not have any superfluous goodies, but it counts

Ladies Only

Let's face it: A woman's physique plays a role in athletic activities such as running or walking. A few companies have addressed this fact by designing products with feminine fitness needs in mind.

Polar's Heart Bra ($34.95) is a sports bra that also holds a heart rate transmitter firmly in place during a run, saving you from constantly needing to readjust the transmitter while you exercise. The Heart Bra's Dry Wear technology with CoolMax and Lycra lining wards off moisture during intense runs.

Polar also makes the F4 ($89.95), an HRM with a feminine touch. Although it isn't quite as full-featured as the S625X, the F4 proves that you don't have to completely sacrifice function for form. The Zone Pointer feature helps you maintain your target heart rate during a workout, and OwnCal monitors the number of calories you have burned. It also displays your average heart rate over the course of your exercise routine, and a built-in stopwatch helps you keep your lap times consistent.

While Polar addressed the transmitter component of heart rate monitoring, MIO went one step further with its MioSHAPE SELECT PETITE ($139.95; www.miowatch.com). Not only does this watch act as a complete HRM, MIO created it especially for slender wrists smaller than 6.75 inches around. If other heart rate watches aren't snug enough, the MioSHAPE SELECT PETITE might provide the comfortable fit you're looking for. ●

steps at all positions perpendicular to the ground. It counts steps in all directions (side steps and backward steps are counted along with forward steps) and even lets you discreetly stash it in your pocket instead of clipping it to your belt.

In addition to counting regular steps, the Digital Premium Pedometer keeps track of your aerobic steps (the steps that really add up to a healthier lifestyle). It begins counting aerobic steps after you reach a pace of 60 steps per minute or after 10 minutes of sustained stepping. The pedometer also records the duration of the aerobic exercise and stores the data for a week, letting you track your progress.

MSI MEGA Player 521. The computer aficionado in your family is likely familiar with MSI for its wide selection of PC products, but MSI has also started producing a handful of consumer electronics. Focusing primarily on MP3 and other digital media players, MSI developed the MEGA Player 521 ($139; www.msicomputer.com) with the athletic, active music enthusiast in mind.

The MEGA Player 521 combines a pedometer with an MP3 player. (It plays both MP3 and WMA [Windows Media Audio] files, so you can mix and match the songs you want to accompany you on your next walk or run.) Like the iStep X1, the MEGA Player 521 downloads files from a PC or Mac (Win98SE/2000/Me/XP or Mac OS 9 and above) with a USB 2.0 interface. Available with 256MB or 512MB flash memory, it gives you plenty of storage space for hours of music, and the rechargeable Li-Ion (lithium-ion) battery lasts 18 hours between charges.

If you're interested in sporty digital music players, see "MP3 Players Built For Sport" on page 48 for a buffet of MP3 players eager to hit the court, field, or track.

Post-Workout CE

Fitness doesn't cease at the finish line of your routine. Here are a few handy products to assist you when you're off the track.

Omron's Body Fat Analyzer (model HBF-306; $60) is one of the fastest ways to check your body composition, and it also calculates your **BMI** (**body mass index**, a fairly reliable measure of whether an individual is maintaining a healthy weight). The Fat Loss Monitor uses Bioelectrical Impedance Method, which sends an extremely weak electrical current through your body to assess your percentage of body fat. It takes readings within seconds and saves up to nine profiles for you to monitor your improvement. The Body Fat Analyzer lets you set the following variables: normal or athletic activity, height, weight, age, and sex.

For the busy executive who only has time to squeeze in a 30-minute workout over a lunch break, Timex's Data Link USB watch (various styles from $85 to $90; www.timex.com) connects to your PC and downloads your schedule, appointments, phone numbers, and contacts, so you'll always be connected, whether you're in your corner office or on the street corner.

Pedometer Prices

About a year and half ago, McDonald's jumped on the healthy-lifestyle bandwagon when it announced its Go Active Happy Meal for adults, making for strange but positive bedfellows. Each meal included a free pedometer. Now you can find the pedometers on eBay for less than the cost of the Happy Meal. Today's pedometer prices range from virtually free to several hundred dollars. Below is a sampling of what's on the market.

- Kellogg's Special K pedometer: Free (with three UPCs with pedometer symbol)
- Oregon Scientific Digital Step Counter: $9.95
- Accusplit Eagle 170 Activity Pedometer: $29.95
- Oregon Scientific Digital Pedometer with Personal Safety Alarm: $29.95
- Sportline Talking Pedometer 343: $29.95
- Omron Digital Premium Pedometer: $40
- Sportline Pulse Monitor Pedometer 355: $44.95
- SportBrain iStep X1: $98.88*
- MSI MEGA Player 521: $139
- Nike/Philips MP3 Run: $279.99

*Package includes two pedometers

With the plethora of devices on the market, you can make your walk or run smarter, smoother, and safer.

Follow Your Heart

A serious pedometer may be better suited for a serious walker, but a high-quality HRM (heart rate monitor) is the tool of choice for runners who want a digital grasp of their progress. Although runners can benefit from a pedometer, and many walkers' exercise routines ratchet up their heart rates, HRMs and running seem to go hand in hand. These HRMs keep an eye on your pulse while you keep an eye on the path.

Suunto t6. Finland-based company Suunto tailors HRMs for runners, hikers, bikers, and even soldiers, so it's a pretty safe bet to say it knows what it's doing when it comes to HRMs. When you combine the Suunto t6 ($499; www.suunto.com) with the optional Foot POD (Peripheral Observation Device), the t6 measures your speed and distance traveled, along with your heart rate and time, giving you a comprehensive analysis of your run. As its name suggests, the Bike POD acts like a Foot POD for bikers. A PC POD, which functions like the USB interface of the SportBrain iStep X1, should be available this summer.

The watch displays data such as lap and interval time, altitude, and barometric pressure. Hikers and bikers should take a look at the Suunto X9, featured on page 45 of "Great Outdoor Gadgets," which provides similar data.

Polar S625X. The Polar name has been synonymous with HRMs for years, and Polar Electro has developed an extensive line of sport-specific HRMs, too. The S625X ($369.95; www.polarusa.com) is the flagship model of its HRMs for running. (The S610i, S210, and S120 round out the lineup.) One particularly interesting feature on the S625X is Polar's proprietary OwnOptimizer. The OwnOptimizer prevents you from overworking yourself by telling you if your recovery time between each training session has been long enough.

If your PC has an IR (infrared) port, the S625X can transmit data from your latest run to a computer.

Nike Triax Elite HRM/SDM. Name any sport that comes to mind, and there's a pretty good chance Nike makes at least one product for it; competitive running is no exception. The Triax Elite HRM/SDM's ($369; www.nike.com) watch has 100-lap memory and records your average pace and heart rate for each lap. It will also alert you if you fall outside a user-defined training zone. Like Polar's and Suunto's HRMs, the Triax Elite HRM/SDM lets you upload your results to a computer (PC or Mac) to accurately assess your results and build an intelligent training plan.

The Road Less Traveled

Despite these helpful gadgets, all you really need for a great workout is a good pair of shoes and the open road. But with today's hustle and bustle, you should demand the most out of workouts. With the plethora of devices on the market, you can make your walk or run smarter, smoother, and safer.

BY VINCE COGLEY

Great Outdoor Gadgets

For Hiking & Biking, These Devices Have Your Number

Whether you're into hiking, biking, or just strolling out under a big blue sky, you'll find a high-tech device to help put a quantitative spin on all the great exercise you're getting. We're not just talking about simplistic devices that track how long you've been walking; we're referring to powerful digital tools that let you track distance traveled, calories burned, your exact location on terra firma, and much more.

What's more, these devices have sturdy construction to help them handle the rough-and-tumble rigors of activities such as hiking and biking. To give you a better idea of the digital tools available for your next outdoor adventure, we've rounded up an armful of these products, listed their features, and made recommendations that will help you find the device that best fits your needs.

Walk This Way

When you think of hiking, you might envision a brisk walk through the woods

behind your home, or you might imagine a week-long backpacking quest in the Rocky Mountains. No matter what sort of hiking you like to do, you can bet there's a digital device to track the results of your exertion, help you keep tabs on others in your party, or simply give you a better idea of exactly where you are.

At the basic end of the spectrum, you can opt for a pedometer that counts the number of steps you take during your journey. A very simple model might cost you around $10.

You don't have to spend a lot more money to get a pedometer loaded with more features, though. Oregon Scientific (www2.oregonscientific.com) sells a diverse line of affordably priced pedometers with a variety of capabilities. The company's pedometers all track number of steps taken, distance, and time elapsed. Individual models also have features such as an FM radio ($29.95; Model PE316FM); calories-burned counter ($19.95; PE316CA); pulse monitor ($29.95; PE316PM); or even a panic alarm ($29.95; PE319), which emits a 120-decibel sound in the event of an emergency. Each model has a programmable computer and customizable sensitivity feature so you can enter the length of your stride and, thus, receive more accurate statistics.

A lot of companies instruct you to wear their pedometers on your belt to help the device capture accurate data. Omron boasts that its HJ-112 Premium Pedometer ($29.95; www.omronhealthcare.com) is so sensitive you can clip it to your belt or just throw it into your pocket, and you'll get an accurate step count. This model also tracks distance, calories burned, and "aerobic steps," which are counted separately when your pace exceeds 60 steps per minute or when you walk more than 10 minutes without stopping. The HJ-112 comes with a seven-day memory so you can review your workouts from the previous week.

If it's accuracy you're after, the Yamax Digi-Walker SW-200 ($21.95; www.newlifestyles.com) pedometer has a reputation for precision. This inexpensive pedometer has only a single function—a step counter—and just one button (Reset) that should make this one easy to use, even for folks put off by more complex digital devices.

Location is everything. A pedometer might help you determine how far you've gone, but those gadgets can't tell you where you are on the trail. That's when super-portable GPS (global positioning system) units come in handy.

Garmin (www.garmin.com) manufacturers a diverse range of GPS-enabled devices, and some of the company's models are well-suited to hiking.

Outdoorsmen's Dream Watch

Handheld GPS units and pedometers are useful for hiking, but sometimes these devices are cumbersome or lack features that you really want for more intense, and more dangerous, treks. Enter the Suunto X9 ($769; www.suuntousa.com), the super spy watch with the C.I.A.-ish name.

The X9 is only a little bigger than the average men's wristwatch, but its feature list shows that it packs the wallop of a computer. In addition to a vast range of time-related functions, the X9 has GPS capability, an altimeter (for extreme elevations as high as 29,500 feet), a barometer, and a digital compass. With the GPS component, the watch shows your distance, speed, and estimated time to your next waypoint. To set those waypoints, you connect the X9 to your computer and upload the necessary data.

To keep the X9 up and running, you have to zap its battery with a small charger. Power-deprived campers will be happy to know that the charger also has a compartment for a 9-volt battery that helps you power up the watch in the wilderness. ●

Super-Connected Cycling Gear

Polar Electro (www.polarusa.com) is one company making computers with advanced features. One of Polar's most complete models is the S725 ($349.99), a wristwatch cycling computer that uses radio signals to communicate with its wheel sensor and a heart-rate monitor that you secure to your chest. The S725 also monitors pedal RPM (revolutions per minute) and tracks both temperature and altitude.

The S725 offers a bevy of connectivity options. You can use the infrared transmitter to send data to your PC. What's more, the S725 lets you transfer your exercise and activity data to compatible Nokia cell phones; you can store your stats and view them on the phone or even whisk the file to a friend's phone.

Perched at the high end of Garmin's handheld GPS units, the waterproof Rino 130 ($375) is for hardcore and well-heeled or professional outdoor types, as it's equipped with a two-way radio with a receiver for seven weather channels, electronic compass, barometer, and 24MB of memory to let you store map data uploaded from your PC. The Rino 130 has a monochrome LCD to show you crucial information on where you are and where you're going. The Rino 130's hefty price tag makes it too expensive for many families who just want to keep in touch during weekend hikes. To save money, you can buy a range of less capable models with lower prices, and for bigger cost savings, you can opt for radio-less versions of these products.

Handheld GPS units are great, but they're unwieldy if you have a hiking staff in one hand and a canteen in the other. Garmin's Foretrex 201 ($182.13) has a wristwatch-like design so you can strap it onto your forearm and instantly access data without digging through your pockets. This Garmin product weighs less than 3 ounces and comes with a Li-Ion (lithium-ion) battery that offers about 15 hours of power. The unit is also water resistant to three feet for as long as 30 minutes.

The 201's trip computer will help you with trip distance, and thus, help you time your arrival through its GPS navigation instrument. This model has TracBack technology, which lets you mark a location (such as a campsite), and then the unit can lead you back to the same spot again. You can also preload directional information onto the Foretrex via its serial PC interface.

Explore other options. Thales Navigation's Magellan (www.magellangps.com) is another company that produces handheld GPS products. The eXplorist 100 ($132.29) is a basic model that lets you track where you're going

A little research will help you invest your money in a hiking or biking tool that will expand your outdoor digital horizon for years to come.

and then helps you find your way back to a starting point. You can also create route plans, and the eXplorist 100 will guide your way.

If you're looking for a more complete model, the top-of-the-line eXplorist 600 ($449) has a 2.3-inch color display, barometer, thermometer, altimeter, and electronic compass. The eXplorist 600 has built-in maps of major North American highways and other landmarks, as well as a Secure Digital card slot that lets you carry as many maps as you want, limited only by your flash card's capacity.

If you want a lot of features in a more affordable model, you might check out Magellan's SporTrak Map ($209.99), which comes with 2MB of built-in maps and has 6MB of extra memory so you can upload more detailed maps from your PC. This waterproof model also comes with a compass, sun and moon position data, and even a feature that tells you when fish will most likely be biting in your area.

Worldly Wheels

When you swap your hiking boots for cycling shoes, your data needs are very different. That's because fast-spinning bike wheels dramatically alter the kind of data required to keep tabs on your workout.

Most bicycle computers have a couple of primary components, including a small computer unit with a monochrome LCD, which is usually connected, via a wire, to a speed sensor mounted near your wheel. As your wheel begins spinning, the sensor detects revolutions with the help of a magnet on your spokes, and the sensor transmits this data to your computer, which displays current, average, and maximum speed, along with distance and other useful information.

Cat Eye (www.cateye.com) makes double-wireless versions of its computers, such as the CC-HR200DW ($179.95) and CC-CD300DW ($149.95), both of which eschew wires for radio signals in order to communicate with their speed sensors. The CC-HR200DW comes with a wireless heart monitor, while the CC-CD300DW has a wireless cadence sensor. Both units have big, bright displays that show four lines of data simultaneously.

Specialized (www.specialized.com) manufacturers a range of bike computers, some with features you won't find in many other products. The 05 Turbo Pro Computer ($110.99) comes with an oversized three-line display that shows a primary performance statistic, such as speed, in large numbers that won't make you squint during a demanding ride. In addition to speed and timing data, the Turbo Pro shows altitude and altitude gain, and it comes with built-in thermometer and inclinometer capabilities, too.

To Hike Or Bike

There are dozens of other products available for both hiking and biking, and if you need a less expensive (and slightly less capable) version of the models we mentioned, you'll likely find one at the manufacturer's Web site. As you shop, keep in mind that not every digital product works as advertised, so before you spend your money, look for user opinions on the Web to make sure the device is all it's cracked up to be. A little research will help you invest your money in a hiking or biking tool that will expand your outdoor digital horizon for years to come.

BY NATHAN CHANDLER

Women's Hiking Companion

Timex (www.timex.com) makes an entire range of outdoors watches specifically for women, and they're all reasonably priced at around $100 or less. One model (#47201; $55) costs much less than other sport-related watches, yet it comes loaded with a lot of helpful features.

This Timex comes with a 100-hour chronograph, 99-lap counter, countdown timer, and a regular range of time-related functions. It also has the company's Indiglo technology to make numbers more visible in low light, and at a fraction of the cost of other watches, this one includes a digital compass to help you stay on course.

MP3 Players Built For Sport

Up The Mountains, On The Trails & To The Gym

In 1999, during a 5-month training regimen for the San Francisco marathon, we invested in two very important accessories: the perfect running shoes and a handheld CD player. The disc player (from Panasonic) featured 40 seconds of "Anti-Shock Memory II" and even flashed the word "Sorry" across its display whenever it skipped. At the time, it was top-of-the line, and it racked up miles all over the city, tucked into a sports bra or strapped to a palm. As our training runs grew longer, we quickly came to wish there were some way to run with more music than one measly CD. And after a few miles, a lighter player would have been a dream. Little did we know that our prayers would be answered, and that one day, we'd be able to fit more than 10 times as many songs on a device an eighth of the size that would never, ever skip.

Just six years later, the market is rich with portable digital audio players—MP3 players—that are custom-designed for athletes and a dream come true for marathoners and Sunday joggers alike. Using flash-memory technology (the same kind of memory that your digital camera uses), portable audio players can store large amounts of digital music, audio books, or other sound files in a skip-free format, which means you can jump, skip, and even trip your way to beautiful music without ever seeing "Sorry" flashed across the display. (See the "Don't Run With Your iPod" sidebar.)

If you're in the market for an MP3 player you can run or vigorously walk with, you'll want to consider your budget, your desire for mind-blowing (vs. adequate) sound quality, usability, look and feel, and features. We put seven of the best players available to the test to see which ones were worthy of our blood, sweat, and cheers.

For serious runners, the Philips+Nike MP3 Run ($299; www.nike-philips.com) is an attractive choice. Not only is it the most

stylish of the players we tested, but also it comes with a wireless SDM (Speed and Distance Monitor), which attaches to the laces of your sneaker and tracks your distance, pace, and time. With the press of a button, you can hear a pleasant, female voice inform you at any point during your workout exactly how far you've traveled and at what pace. You can even program it to announce the time, speed, and distance at set intervals. (There is also a visual cue, in case you prefer not to hear voices over your music tracks.)

The MP3 Run has 256MB of storage, which is enough room for 100 MP3 tracks, depending on the size of the files, and an FM radio with 10 presets (which you cannot use in conjunction with the SDM due to frequency conflicts). If you're listening to the radio instead of your MP3 files, you won't be able to monitor your speed, distance, or pace. It also has a backlit display and strobe light for low-light conditions. The earbuds that come standard were the best of any we tested, and the sound quality of this player was above average, although the maximum volume left us wanting a little more. The MP3 Run comes with software that will help you track your workouts using the results gathered by the SDM. It's lightweight, doesn't require a battery, and fits comfortably into your palm, pocket, or the included armband.

Don't Break The Bank

If the MP3 Run is a little beyond your budget, there are two excellent and sport-friendly substitutes for less than half the cost: the Rio Forge 128MB ($129.99; www.rioaudio.com) and the Sony S2 Sports Network Walkman Player NW-S23 256MB ($129.95; www.sonystyle.com). The Rio Forge won us over with its good looks and easy-going personality. It comes with a stopwatch and radio features, offers above-average sound quality, and doesn't require that you install its bundled software in order to receive MP3 or WMA files. It was the fastest unit out of the box and onto the treadmill.

It's no surprise that Sony, the company that pioneered the portable audio category of consumer electronics, has produced an excellent next generation of Walkman in its NW-S23. It has a practical and sporty design—lightweight, water resistant, and easy to run with. And it was the only player we looked at that features a sensible protective cover for the USB port on the unit. Like the other 256MB players, it can hold approximately 100 songs and can play for close to 70 hours on one AAA battery.

Audiophiles will find either the iRiver iFP 790 ($129.99; www.iriveramerica.com) or the iFP 890 ($129.99) to be a must-have. The sound quality in both players is exceptional, and they both allow for finicky equalizer adjustments on the fly. The iRiver players include an FM receiver and 256MB of memory (about eight hours of music, depending on the file type). The players are blood red and are about the size of two lipsticks strapped together. The included sport armband, carrying case, and neck strap are handy, but this player is so small, you can also carry it or tuck it away in a pocket or sports bra without any hassle.

The Eyes Have It

If you've ever envied the cool gadgets Jennifer Garner's character, Sydney Bristow, gets to use on the spy show "Alias," you'll be pleased to discover Oakley has introduced a new line of sunglasses with an audio player built right in. The Oakley Thump ($495) comes in seven color combinations, with either 256MB or 128MB of flash memory. We expect the next generation to be more sleekly designed, but for now, the sound quality is excellent, the earpieces are comfortable and adjustable, and it's so simple to use that within 10 minutes of opening the box, you can be running, biking, hiking, jumping rope, or anything at all, hands-free, with 100 of your favorite tunes and no cords to hang you up.

Wear Your Music

All of the flash-based players we tried have an armband to make moving with your music easy. Our favorite, the Sony armband, was comfortable, easily adjustable, intuitive to assemble, reflective, and the most secure; the player attaches by way of a metal screw for serious stability. If armbands aren't your thing, but you still want to run hands-free, Mari Dade (www.maridade.com) has included two items in her spring collection: the iPod Curt track pullover ($98) and the iPod Pant ($102), which both include a pocket specifically designed to hold music players. Tune Belt (www.tunebelt.com), an Ohio-based catalog company popular with runners, also offers several functional (but not so attractive) neoprene holders for less than $20.

In the ease-of-use, portability, and affordability categories, the Creative MuVo TX FM ($109.99; www.creative.com) is the hands-down winner. It has 256MB of memory standard, but you can buy units with 128MB ($89.99), 512MB ($159.99), or 1GB ($209.99) of memory. This ultralight player is about the size of a Zippo lighter and weighs only 1.1 ounces (not including the AAA battery). It comes in four colors (silver, white, blue, and red) and requires no software and no USB cable to work. Just bring it home, pop it out of its (tiny) battery pack, plug it into a USB port, and drag your digital audio files to it—as you would with any removable drive—and you're ready to go. It also has an FM receiver, some mediocre earbuds, and an armband. The sound quality was above average, and if you want only enough music to get you through a few good runs at a time, the 128MB version, which retails for about $70, is the best buy in the bunch.

Also from Creative is the MuVo Sport C100 ($99.99). This player looks like a stopwatch and features a lap timer, split timer, and countdown timer. The Sport C100 scored big points for its drag-and-drop capabilities (no software needed), and its splashproof casing is a nice touch, but compared to the others in our tests, the C100 didn't really measure up. The sound quality is good, but the included headphones are unbearably uncomfortable and not adjustable, and the armband is ungainly, rendering it not-so-portable after all. We found that there are many more attractive, more fully featured, lighter-weight players for a better value.

Don't Run With Your iPod

You've likely envied the women—or girls—working out at the gym with their shiny new iPods; perhaps you're even one of them. But, the truth is, it's not a good idea to bring your beloved music machine onto the treadmill or out onto the trails. The iPod and other high-capacity MP3 players, such as the Dell DJ, store music on an internal hard drive that has delicate moving parts. If you jostle your iPod at the wrong time during your run or, Oops!, send it crashing to the pavement, whatever you were listening to may become your player's swan song. If you must have an iPod, go for the iPod shuffle, which constantly shuffles your music for you, but which uses workout-friendly, skip-free flash media to do it.

Light & Lively

Whatever your needs, the days of toting around bulky portable disc players are a thing of the past. We're still fond of the old Panasonic, but we've been pleased to discover that running with flash-memory portable audio players means never having to say you're sorry.

BY NAOMI GRAYCHASE

Speakers should be heard, not seen. That's why we put them in the screen.

Three speakers integrated into the frame, two surround sound speakers and a subwoofer complete the system.

Introducing the Da-Lite Acoustical Imager

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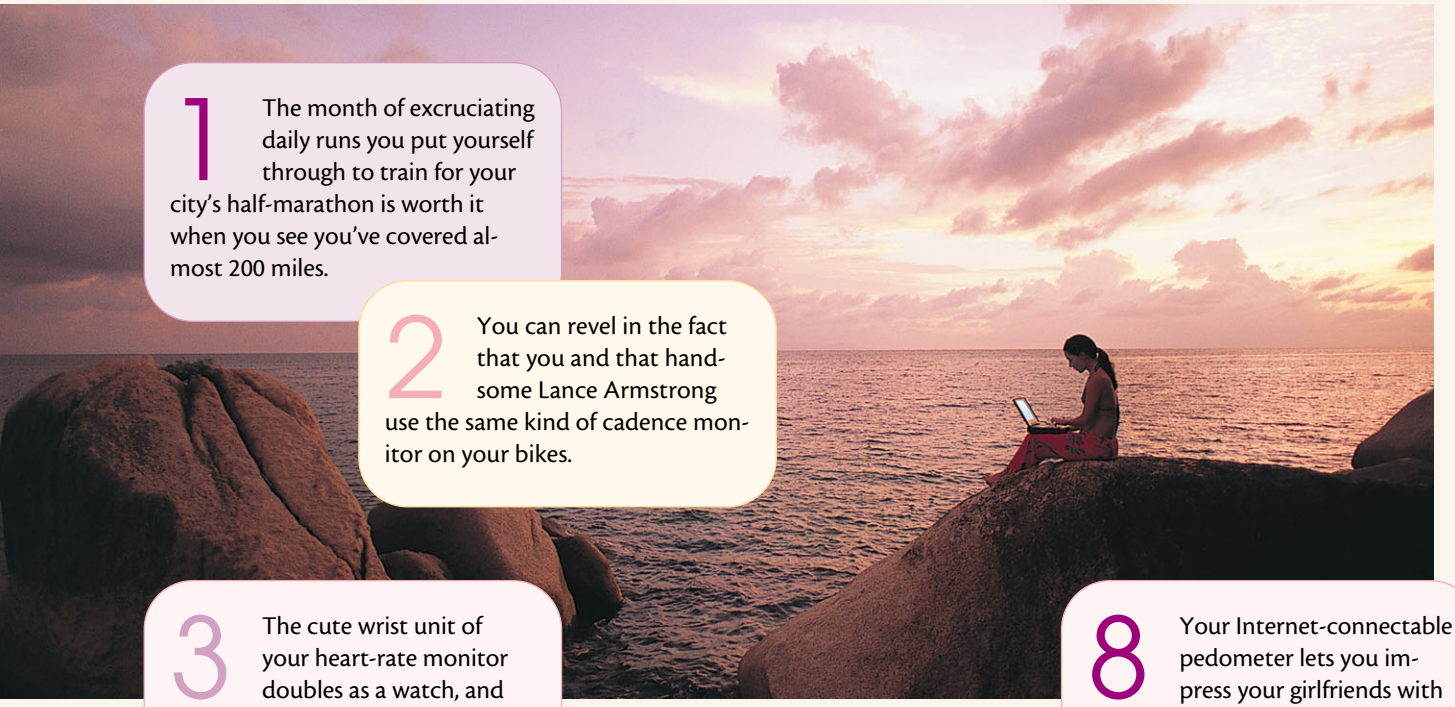
Editor's Top Ten

Reasons I Love These Devices

CE Lifestyles editor Katie Sommer brings the CE fun outdoors with her top 10 reasons why digital sport and GPS devices make any tech girl into an athletic diva.



1 The month of excruciating daily runs you put yourself through to train for your city's half-marathon is worth it when you see you've covered almost 200 miles.

2 You can revel in the fact that you and that handsome Lance Armstrong use the same kind of cadence monitor on your bikes.

3 The cute wrist unit of your heart-rate monitor doubles as a watch, and the pale blue goes perfectly with your new sage green polo.

4 Get lost—but not too lost—with your special someone: You can hide a GPS unit discretely in a picnic basket and take your sweetie to a romantic rural setting.

5 If you're a casual exerciser, people who see the chest strap to your heart rate monitor will be fooled into thinking you're a serious athlete.

6 It's very rewarding to expand the bicep band of your MP3 player a couple of centimeters after a few weeks of an effective upper-body workout.

7 You won't have to haul around all-weather gear, such as a raincoat, extra socks, sun block, and gloves, if you use a combination weather/GPS device when you go hiking.

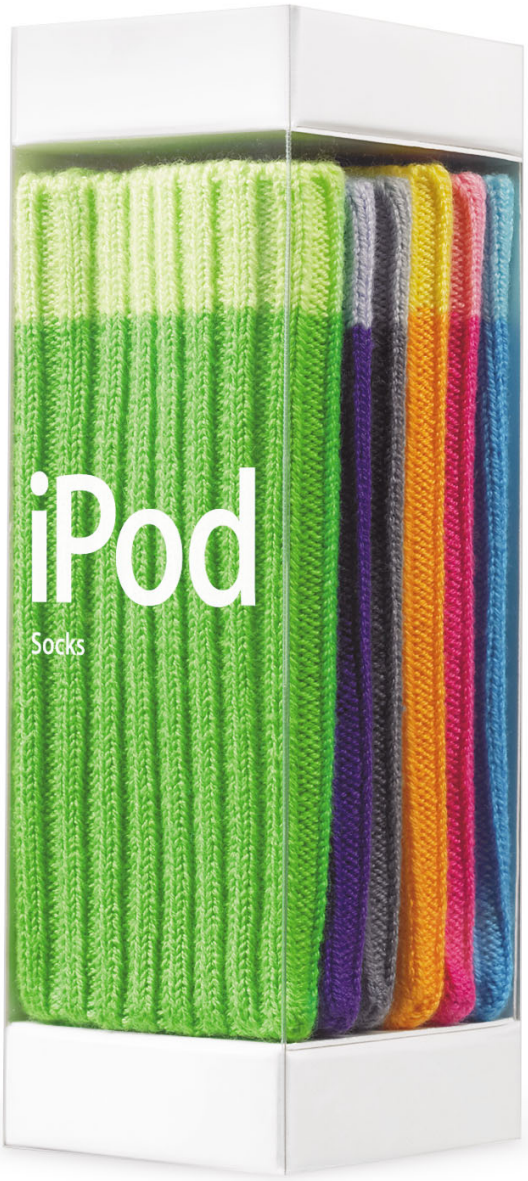
8 Your Internet-connectable pedometer lets you impress your girlfriends with your walking routine when you share it with them via email.

9 On your family camping trip, you can finally let your teenage kids get a taste of the freedom they crave by letting them use a GPS device to roam in the wilderness.

10 Cycling up the steep hill by your house is somehow easier when you have "Hey Ya" playing on your MP3 player and cheering you along.

Tips

Keep Your Sport CE Clean & Organized



Courtesy of Apple

Sweatproof Your Gear

Many manufacturers of CE devices provide accessories for their gadgets that protect them from the elements, including sweat and grime, during your workout. iPod users, for example, can outfit their players with protective sleeves called iPod socks ($29; www.apple.com). Although some accessories aren't waterproof, they will help prevent dirt from coating your electronics.

Tote Your CE

Instead of throwing your pedometer, earbuds, and MP3 player into a jumbled pile on your sweaty gym clothes, buy an organizer that can keep your gadgets safe and organized, with all the parts stored in one place. Look for an organizer that can fit inside your gym bag so you only risk forgetting one thing at the gym instead of two. Plus, with an organizer, you are able to keep your devices separate from your sweaty clothes. If you prefer to carry your electronics in a separate bag, try a small messenger bag, which has plenty of pockets for neatly storing your sport CE.

After-Workout Wipe Down

After every workout, use a nonabrasive, slightly damp cloth to wipe down your electronic essentials—especially those that are worn close to your body, such as heart rate monitors, or any device you hold in your sweaty hand. Clean your devices after each use that puts them in contact with sweat or outdoor dirt and grime. Make sure the cloth is lint-free so particles don't enter your devices' openings.

Replace Filthy Parts

If you don't clean your sport CE devices as often as you should, you can replace some parts at little cost. Many earbuds and other CE devices come with replacement foam or plastic protectors, and you can replace fitness watch bands and the cloth parts of most HRM chest straps for a fraction of the cost of the original product. Keeping the parts on your electronics clean not only keeps you sanitary, but also prolongs the life of your equipment by keeping it in prime condition.

Don't Share Germs

It may be difficult to say no to a friend who wants to borrow your gym equipment, especially when you take into account the cost of some of these items. But, if you agree, you take the risk of mixing your sweat and dirt with hers if you don't clean the equipment thoroughly between uses. Sharing sport electronic devices also puts you at risk of getting germs from a friend's cut or blister if she has an opening on her skin or hands that makes contact with your devices. To be safe and healthy, don't take any chances of spreading (or receiving) germs; keep the devices you wear close to your body to yourself. ce

BY BRIAN WEED

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- Delivers sound and video wherever you want it

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- Delivers three independent streams of music on demand
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Scan Your Negatives

Old Negatives & Images Come Full Circle

Think back to the early days of your photography hobby. Do you remember when you processed your first roll of film? Tucked inside the wimpy paper envelope that held those priceless prints were those all-important negatives. You carefully labeled and stored the envelopes, just in case you needed to use the negatives in the future.

Well, the future is here, and you have a decision to make. Should you hang on to those negatives (be honest, you never touch them), or invest some time and money into a scanner that will yield digital images you can store and edit?

What To Look For

The decision you make depends on a variety of factors, including how badly you need to keep quality backup images, how much you can afford to spend doing so, and whether you have the space and time to accommodate a new piece of hardware.

To help you make that decision, we scouted out the market to see what's available and at what cost. If you're thinking of buying a scanner, consider these factors:

Resolution. Resolution is measured in pixels or dots per inch, which you'll see as dpi. One pixel contains three bytes of color—one each of red, green, and blue, which are the dominant colors of the

light spectrum. (RGB is one way to describe the "additive color system," and it's an abbreviation you'll see a lot when shopping for a scanner.) Most scanners will yield resolutions ranging from 2,000 to 4,800dpi.

Speed. Generally, the faster the scanner works, the more expensive it is. Professional-grade scanners incorporate technology that increases the scan time and also increases the quality. So, cheaper scanners boast quicker preview or scan times, but, from start to finish, higher-end scanners do more thorough work in a relatively shorter amount of time.

Film size. All scanners that scan negatives can handle the common 35mm format. But you may have negatives in other sizes, so look for models that can accommodate all the formats you need to scan. Mounted slides are another consideration. Generally, only the more expensive models can scan those. And if you work with black-and-white film, you'll need a suitable scanner.

Image-editing tools and technology. Lower-priced models may include a basic image-editing program and a couple of autofix tools. If you're looking for professional-quality images, though, one feature to shop for is DIGITAL ICE, an autocorrection technology developed by Eastman Kodak's Austin Development Center (www.asf.com). The latest version is DIGITAL ICE4, so named because it now features a fourth technology: enhancing the contrasts and exposure levels in shadowy areas of images. The other three technologies correct color, reduce graininess, and remove scratches and dust from the negative's surface.

DIGITAL ICE4 is featured in scanners from several manufacturers besides Eastman Kodak, including Minolta, Microtek, and Nikon (its Coolscan line of scanners). The scanners in this line are upright, as opposed to flatbeds, and range from the Coolscan V ED ($599.99) to the Super Coolscan 9000 ED ($1,999.99). The Coolscan V ED scans images in 38 seconds at 4,000dpi. It comes with adapters for negatives and slides.

An affordable midpriced option is the Microtek ScanMaker i700 ($349). It's a flatbed scanner with adapters that can scan batches of negatives, slides, or photos with 4,800dpi and 48-bit color. It features DIGITAL ICE and ColoRescue, a color restoration tool. Like many scanners, it sports buttons (in this case eight) on the exterior that act as shortcuts for the scanner's tools.

If high resolution and speed is key, look at the Konica Minolta DiMAGE Scan Elite 5400 II ($1,099). It scans up to six frames or four mounted slides simultaneously at 5,400dpi at about 25 seconds per scan. This 3-pound upright model is about 6 inches wide.

A Simple Process

We tested one of the lower-priced models, the CanoScan LiDE 500 F ($129.99; consumer.usa.canon.com), and found the scanning process pretty easy. The following steps demonstrate

Budget-Busting Scanners

HP Scanjet 8290 Duplex Document Scanner
$1,499
www.hp.com

This HP model can scan multiple 35mm negatives and slides at once with its special adapter at 4,800dpi and 48-bit color. You'll see previews in just 4 seconds. It also scans documents and photos and comes with lots of software, including HP's Photo & Imaging.

Nikon Super Coolscan 5000 ED
$1,099.99
www.nikoncoolscan.com

Scan 35mm negatives and slides in just 20 seconds at 4,000dpi. This upright model, which weighs just 6.6 pounds, uses a low-heat LED light source and a two-line linear CCD (charge-coupled device) image sensor.

Kodak Professional HR Universal Film Scanner
$40,000
www.kodak.com

OK, this won't realistically fit in many people's budget. But this scanner is a good example of how costly fast scanners are. If you don't use the built-in Digital ICE4 technology, it can scan as many as 500 images in an hour. The HR Universal model is fairly compact (14.5 x 23.5 x 30.5 inches [HxWxD]) and can handle just about any film type: color, black and white, 35mm, 46mm, 70mm, 120/220, and 4 x 5. And it can even scan single cut negatives.

Another professional-grade scanner from Kodak, the HR 500 Plus, retails at $45,000.

what you'll need to do to operate a flatbed model.

First, install the software. The CanoScan comes with one essential component, the ScanGear CS driver, and five optional programs, including Adobe Acrobat Reader, the ArcSoft PhotoStudio 5.5, and the CanoScan Toolbox 4.9.

Second, position the scanner. The CanoScan works in three positions, including standing it on its side to save desk space. But you can't scan negatives in that position, so we set the scanner flat. Aside from plugging in the USB 2.0 Hi-Speed connector, the key step is to slide the lock switch on the bottom of the scanner to the unlocked position. The scanner won't work unless you unlock it.

Third, begin the scan. Before attempting to scan a negative, we chose the easier task of scanning a photo so we could get a feel for how everything works.

- Place the image on the scanner bed.
- Open PhotoStudio and choose Select Source from the File menu.
- Choose CanoScan.
- Click Acquire from the File menu. This opens the ScanGear interface.
- Select your preferred Destination and Output Size settings.
- Click Preview. This will display in a few seconds.
- (Optional) Crop the image and check options for automatic correction of fading and backlighting problems.
- Click Perform Scan. This took less than five seconds.
- Finally, save the image.

We then scanned a negative, which is a bit trickier because it requires working with a couple more pieces of hardware: the film guide and the film adapter. The film guide snaps onto the top of the scanner's glass bed. After removing the cap from the adapter, we plugged the adapter into the side of the scanner and then positioned it on top of the guide.

Online Options

If buying, maintaining, and storing extra equipment just to scan negatives doesn't appeal to you, you can patronize one of several Web-based companies that offer scanning services for negatives. Here are three good ones:

DigMyPics
Mesa, Ariz.
www.digmypics.com

DigMyPics scans a whole strip of negatives at 2,000dpi for 79 cents each, for the first 99 strips. For 100 to 499 strips, the price drops to 59 cents, and orders of 500 to 4,999 cost just 49 cents a strip. Increasing the resolution to 3000dpi (10 cents) or 4,000dpi (20 cents) adds to the price of each strip. Strips are scanned on the Nikon Super Coolscan 4000 ED or 5000 ED.

You can place your order online and mail the negatives to DigMyPics. There is a $30 minimum per order, and each order receives a complimentary copy of the Image Manager application. You'll need to pay by TeleCheck or credit card.

Imagerylab
Pullman, Wash.
www.imagerylab.com

This service scans 35mm film negatives of up to six images per strip using Nikon Super Coolscan 8000 and 9000 scanners for $1.39 per scan at a resolution of 2,000dpi with 24-bit color depth. Costs increase for 4,000dpi and/or 48-bit color. Imagerylab also scans many other film formats, including 4 x 5 inch, which are scanned on an Epson scanner.

Create your order with Imagerylab on the Web site—$35 minimum required—and then pay with PayPal or cashier's check. You'll receive your digitized images on a CD or DVD.

Larsen Digital Services
Ogden, Utah
www.slidescanning.com

LDS cuts strips of negatives into individual frames, mounts them, and then scans them on the Nikon Super Coolscan 4000 ED. The standard service includes a variety of automated fixes, including color correction, fade restoration, and elimination of fingerprint smudges. The deluxe service offers those automated corrections plus manual adjustments.

Use the site's calculator's to determine the cost of your order (a $30 minimum order is required). There are several variables that determine the cost, such as the resolution you want your negatives scanned at (1,333, 2,000, or 4,000dpi), the format (JPEG [Joint Photographic Experts Group] or TIFF [Tagged Image File Format]), and storage medium (CD or DVD) for your images. Print out the order, mail it with your negatives, and pay via personal check or PayPal.

You must calibrate the CanoScan before attempting to scan negatives. This means placing the guide and adapter in their proper positions, closing the scanner's cover, and following the bulleted steps above, starting with opening PhotoStudio. When you get to the Preview part, the calibration begins. Upon completion of the calibration, you can place the negative into the film guide, carefully lining up the frames with the lines on the guide. Gently place the adapter on the frame you want to scan and resume scanning by following the bulleted steps above.

We were impressed with CanoScan's ease of use and were pleased with the quality of the scans. You can scan images using the maximum resolution of 4,800dpi, and you may then edit your images in PhotoStudio or another photo-imaging application. Sure, CanoScan has limitations compared to more expensive models. For example, it isn't equipped to scan slides, and its form, though thin and light, means you need ample desk space in order to lay it flat for scanning negatives.

However, this and similarly priced models are a quality buy if you want to scan and save negatives, prints, and documents.

To Toss Or Not To Toss?

As you decide whether to keep or toss your negatives, consider these pros and cons.

Toss. Digitizing your negatives requires much less physical space for storage—a few CDs or DVDs as opposed to boxes of envelopes. Thus, it's easier to keep your backup images in a protected space, safe from potential harm from moisture, light, and other elements.

In addition, digital images give you greater flexibility. Once they're on your computer, you can use applications to edit them and incorporate them into creative outlets such as calendars, greeting cards, screen savers, and slide shows.

And there's one more advantage: If you're a shutterbug who prefers your trusty old 35mm SLR camera to digital cameras, you can still enjoy the benefits of digitized images.

Keep. One knock photo hobbyists have against throwing away your negatives is that hard drives and other digital storage devices, such as CDs and Zip drives, can fail or deteriorate over time. So for extra-special images, such as those taken on vacations or at weddings and graduation, your best bet is to scan those images and then secure the negatives in a clean, acid-free storage container in a relatively cool, dark place.

If you have old, uniquely sized film negatives, you may not have a choice but to keep them if you need future copies. Some scanners and scanning services aren't capable of making images from these negatives.

What's Next?

Your purpose for scanning negatives may be nothing more than to have digitized backups for your images. But, of course, you don't have to stop there.

With a photo-editing program, a color printer, and photo paper for your printer, you can render new prints. As is the case with scanners, photo-editing programs range greatly in price, from the newly released, professional-grade Adobe PhotoShop CS2 ($599; www.adobe.com) to the built-in editor that comes with a scanner.

Or, if you don't want to invest in extra software and hardware, you have options. A local professional photo developer can print digitized images to CDs and DVDs, but you don't have to leave your home for this service. At the Wal-Mart online Photo Center (www.walmart.com), for example, you can download the free My Wal-Mart Digital Photo Center and install it on your system. Then, you can use it to upload your digitized images and order prints through Wal-Mart.

Snapfish.com (www.snapfish.com) offers similar services, but you don't need to install extra software. You can upload or email your digitized images to this site and receive pictures printed in the size of your choice on Kodak paper.

In doing so, your negatives and photos will have come full circle.

The CanoScan is lightweight and easy to use. We added the film guide and adapter when we were ready to scan negatives.

BY RACHEL DEROWITSCH

BRILLIANT • BETTER • **BENWIN**

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Know How

One Problem, Three Solutions

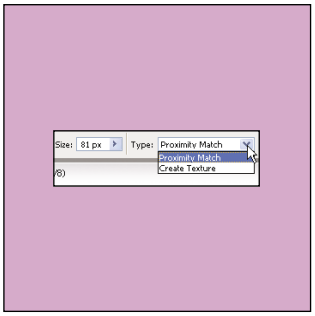
BY BRIAN HODGE

Occasionally our appearance isn't, shall we say, something to record for posterity. There are bad hair days, and then there are bad skin days. A hat can take care of the former. For the latter, unless we hide behind our hands, the flaws are right out there for all to see . . . and see again if we've been in front of a camera. That's where our photo editors come in. All three let you zap a blemish faster than you can say Clearasil.

You won't find a complexion much clearer than on our model, but—as much as it pained us to do so—we've given her a black spot that will be easy to see in the illustrations.

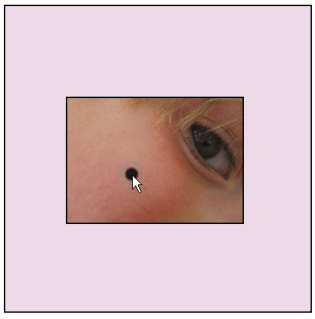
Adobe Photoshop Elements 3.0

Open your photo in the workspace and keep the program in Standard Edit view. The tool we'll be using this time isn't available in PSE's Quick Fix view. Also, you may want to zoom in on the affected area because you'll be working with a comparatively small patch of skin.



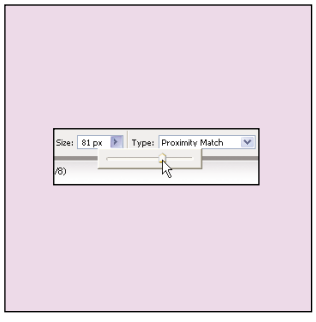
Next to the Brush Size is a drop-down menu for the Healing Type. Leave it on Proximity Match. The Healing Brush works by replacing the blemish's pixels with pixels from the clear skin. Proximity Match tells the brush to use only pixels from the edge of the brush's selection area.

Choose the Spot Healing Brush from the left toolbar. It's one of two choices in the submenu that looks like a Band-Aid.



Position the brush over the blemish and click once.

In the Options Bar, set the Brush Size. Either click the blue arrow to open the slider and then drag it or type a size into the field. For a round blemish, set the size to cover a little more area than the blemish itself.

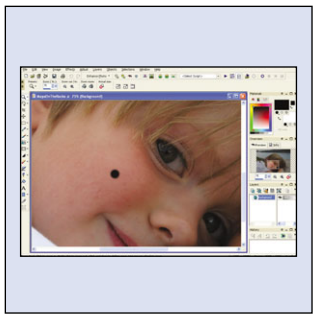


Voila! In most cases one click is all it takes. If the results don't look quite as seamless as you'd hoped, click the same spot again to hit it with another round of healing.

Jasc Paint Shop Pro 9

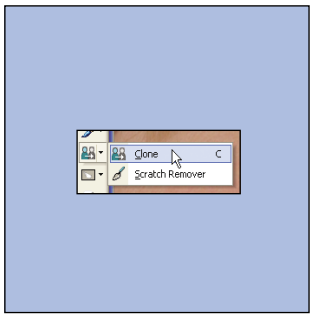
1

With your photo open in the workspace, zoom in on the blemish. Because of the interactive nature of this program's tool, get fairly close up.



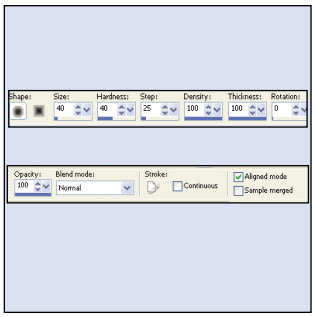
2

Choose the Clone Brush from the left toolbar. PSP doesn't have a separate blemish or spot remover. The Clone Brush is a more general-use tool, but it uses the same basic principle as Photoshop's Spot Healing Brush: replacing pixels in one area with pixels from another.



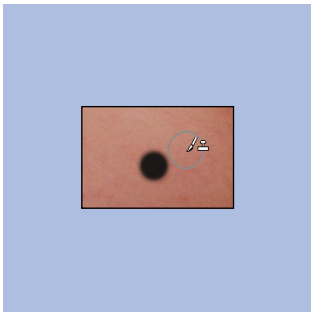
3

Here are some general guidelines for the Options Palette: Use a round brush about the size of the blemish; use moderately low Hardness and Step values; use maximum Density, Thickness, and Opacity; set the Blend Mode to Normal; and, finally, select the Aligned Mode checkbox.



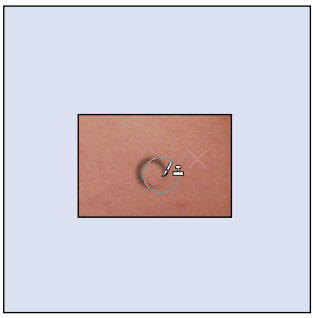
4

Right-click a nearby area of clear skin. This designates where the replacement pixels will come from.



5

Click and drag over the blemish to paint new pixels over the old. The donor point will follow your mouse movements; an X marks the active donor point. With Aligned Mode checked, the donor point will remain equidistant from your brush each time you click a new blemish.



6

For completely natural-looking results, you may have to experiment with both the Options Palette settings and your technique. Try starting in the center of the blemish and moving outward in a circular motion.

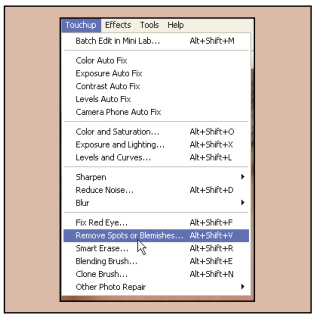
Microsoft Digital Image Pro 10

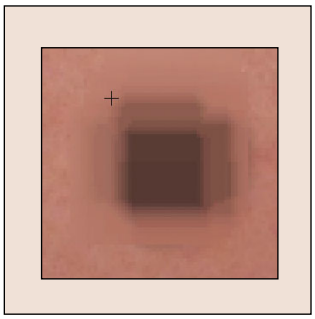
1

Open your photo in the workspace and zoom in to a level you'll feel comfortable working at.

2

From the Touchup menu, select Remove Spots Or Blemishes.

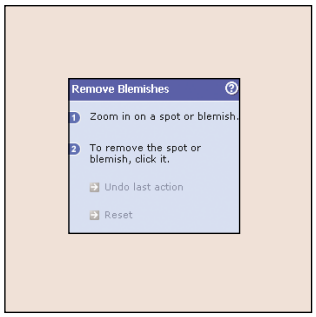




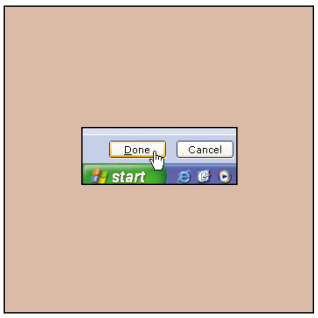
To fix a blemish, DIP averages the area's pixels and puts a uniformly toned square over the blemish. It works best when fixing a flesh-toned area, instead of our high-contrast spot. At high magnification, the fix looks artificial, but when zoomed out, it should sufficiently blend.

3

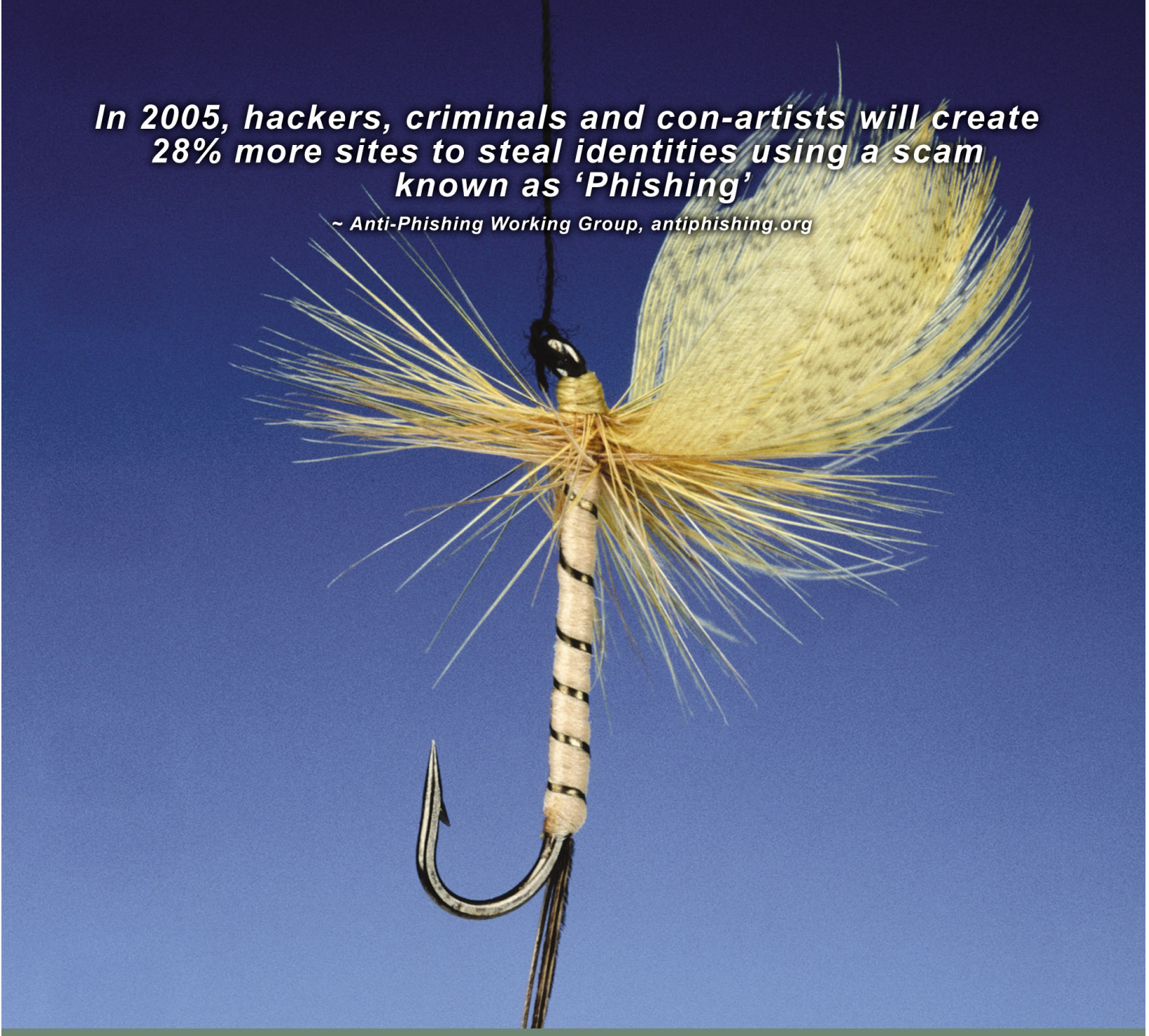
The Instruction Panel makes it clear how to proceed: Zoom in (we've already taken care of that) and click the blemish.



5

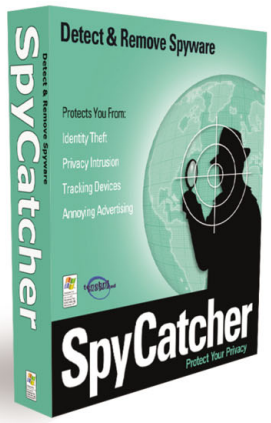


Click Done.



Be the one that got away

Smart Computing In Plain English
JANUARY 2005 SMART CHOICE



Phishing is a type of identity theft that uses legitimate-looking e-mails and Web sites to dupe you into divulging your personal and financial information. ***SpyCatcher 3.5*** is the most advanced anti-spyware and anti-phishing tool available. Its patent-pending technology warns you when the site you're visiting may not be trustworthy, in addition to protecting you from thousands of types of spyware, adware, trojans and many other threats to your privacy online.

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Look & Listen

Get Better Audio With Your Digital Camcorder

When technology, creativity, and aesthetics collide, our senses get sophisticated pretty quickly. We're always looking for ways to shoot a better picture, optimize our home theater, or create the ultimate iPod playlist. We can become equally obsessive about home video, although many people concentrate on image quality without giving much thought to the audio they're recording.

Video quality is vital, sure, but audio should also be a priority. And if you're at that point where you're getting pickier about camcorder audio—or you've decided to get your first camcorder and want to start on a high note—more quality control is in your hands than you may realize.

Let's Go Shopping

Practically any new digital camcorder that you might look at has a built-in stereo microphone that will do an adequate job. But as you gain expereince and want higher quaility, adequate may soon turn to not good enough.

Camcorder manufacturers implement different audio features from model to model, so there's plenty to shop for and room to move on if a unit lacks an important feature. We'll cover built-in features in the main article and offer accessory suggestions in a sidebar.

Front-mounted microphone. Built-in camcorder microphones are located one of two places: on top or on the front end. Go for the latter; this position captures a better, more balanced sound than top-mounted mics, which tend to pick up the voice of the camera operator so well that it dominates everything else. And with the mic located on the front, you're naturally pointing it at your subject.

Zoom microphone. Just as a zoom lens narrows the camera's field of view, a zoom mic narrows the area from which the sound is captured. Built-in zoom mics are synchronized with the lens, so the primary audio comes only from the area in the viewfinder.

Imagine you're at a crowded birthday party and your camera is on full wide-angle as you shoot across the room. Your viewfinder is filled with a dozen people, and the audio track is recording only clamor. As you zoom in tighter on the guest of honor, the audio will get clearer as the other people are excluded from the viewfinder. By the time you're framing a head-and-shoulders shot, the zoom mic should clearly pick up the honoree as she orders you to aim the camera elsewhere while she's eating a piece of cake the size of a brick.

Most zoom mics operate only in mono, so you'll lose the spaciousness of stereo sound, but if you couldn't otherwise hear it, you might find it an acceptable sacrifice.

Low self-noise. If you're using the built-in mic, a camcorder is probably going to pick up noise from its motor—a constant whir or whine. Some models are much worse about this than others, though, and it can be downright annoying during a tranquil, idyllic shot of your baby sleeping in her crib.

Unfortunately, you can't tell from a list of features how much motor noise a camera records. If motor noise concerns you, take along a blank of whatever media your prospective camera uses (likely a MiniDV tape or DVD-R) and give an in-store demo model a try. As

Digital Audio

A Quick Primer

Digital audio has little in common with analog media such as cassette tapes and vinyl albums, which contain a perfectly contiguous recording of the sound. Instead, digital audio is actually more like video; it's a series of still-frames that we only perceive as contiguous during playback. But whereas video can fool our eyes at 30fps (frames per second), it takes a much faster playback rate to fool our ears.

The standard audio resolution for digital video is 48KHz/16-bits.

The first number is the sample rate—how many times per second the sound has its picture taken as it is converted into digital data. A 48KHz rate means that each second of audio consists of 48,000 slices of data. That's just a little more than commercial music CDs, which have a sample rate of 44.1KHz.

The second number is the bit depth. For each incremental data slice, the signal's volume is entered. Unlike tape or vinyl, digital can't permit an infinite gradation of volumes, so each sample has to be rounded off to the nearest available level. The more available values there are, the smoother the audio quality is. A 16-bit resolution provides 65,536 levels, the same as commercial CDs.

Many camcorders let you record at a lower resolution of 32KHz/12-bits. This frees up data space for an additional pair of audio tracks, so you can later perform in-camera dubbing to add music or narration. But if you want the highest possible audio quality, stick with 48KHz/16-bits. If you still want to add music or voiceovers, do it on your computer in a video editor. Even operating system freebies such as Windows Movie Maker and iMovie support multiple audio tracks.

For built-in components, a front-mounted microphone will capture better audio than a top-mounted mic.

Camcorder Audio Accessories

No matter how full-featured your camcorder is, you can always get more out of it with a few well-chosen accessories. Your biggest improvements in audio quality will come from three main categories.

External microphone. This is the single best investment you can make. You'll not only end up with higher quality components compared to most built-in mics, but you'll also put some distance between the mic and camera motor, cutting down on self-noise.

Many models and types of microphones are available, and for a good overview, check out Sony's lineup (www.sonystyle.com). Its ECM-HS1 Gun Zoom Microphone ($69.99) is a popular pick for first-time mic buyers.

If you have a bigger budget, consider Sennheiser's MKE 300 ($249.99; www.sennheiser.com), the microphone of choice for many professional wedding videographers.

Shock mount. One of the tougher types of noise to eliminate is the sound of routine fumbling. A shock mount is a simple suspension mechanism that isolates a tube-bodied mic from impacts, vibrations, motor hum, and routine jostling. For a good budget model, check out Beyerdynamic's EA 86 ($29.95; www.beyerdynamic.com), which fits into the accessory shoe and secures the mic with thick rubber bands.

Noise reduction software. Despite your best intentions, you can still end up with footage plagued by unwanted noise: the hum of an air conditioner, tires on the highway, and more. But you're not stuck with it. BIAS SoundSoap 2 ($99; www.bias-inc.com) is an excellent audio cleanser that gets rid of hums, pops, and crackles. It can even learn a specific noise and then strain it out. Available for PCs and Macs, it works as a stand-alone application or as a plug-in inside a host editor such as Adobe Premier or Apple Final Cut Pro HD.

for checking the playback, you should also have brought some headphones, so you can shut out the store ambience and give the audio closer scrutiny with our next item.

Headphones jack. Camcorders typically have a built-in speaker, but you should not rely on it to tell you much, other than whether you picked up sound at all. Chances are it's going to be so small, with such a tinny sound, that you can't accurately judge the quality or clarity of the audio.

But if your camcorder includes an output for a pair of headphones (usually in the 1/8-inch mini-jack size), you can use them to gauge a much better assessment of what you're recording.

Input jack for external microphone. Inputs (again, usually 1/8-inch mini-jacks) are one of the features that manufacturers sometimes omit in the interest of making smaller cameras. It's a lousy tradeoff, though, if you're interested in improving on the built-in mic's capabilities. An add-on microphone will nearly always deliver a big improvement to your audio quality.

Accessory shoe. And this is where you'll attach that external microphone. A **shoe** is a small mounting bracket atop the camera. Photographers often use shoes for lighting attachments, but they will just as easily hold microphones.

All shoes aren't the same, though. A basic shoe simply holds the accessory in place. A **hot shoe** also supplies power to the attachment. An intelligent shoe permits two-way communication between the camera and the accessory; both components usually need to be from the same manufacturer to accomplish this. For instance, Sony makes external zoom microphones that, when mounted on a

compatible camera equipped with an intelligent shoe, will maintain full synchronization with the lens.

Wind protection. When wind hits a microphone, it records as a loud, snapping rumble that can drown out everything else you're trying to record. A wind filter alleviates this problem by removing the low sonic frequencies where the rumble is strongest. The filter can sometimes affect the midrange frequencies too, though, leaving voices sounding a bit nasal. A built-in windscreen may be a better choice because it shields the mic from gusts in the first place.

Sounds Good

Just how important is clear audio for conveying filmed reality? Consider the little boy we heard of recently who prefers watching "Jurassic Park" with the sound off. He's fine with the sight of marauding dinosaurs—the sounds scare him!

Improving your audio doesn't have to be a monstrous endeavor. All it takes is a few informed choices.

BY BRIAN HODGE

Adding an external microphone, such as Sony's ECM-HS1, should be your top priority if you're serious about improving your audio quality.

A shock mount, such as Beyerdynamic's EA 86, will isolate an external microphone from audible impacts and camera-handling noise.

BIAS SoundSoap 2 uses a few controls and a color-coded window to scrub your audio of extraneous noise.

A Mic By Any Other Name

So you've decided to add an external microphone to your camcorder; good for you. Be sure to choose a microphone that matches your shooting habits and delivers what you're after. Not all mics respond the same way. The distinction among mono, stereo, and surround microphones is self-explanatory, but things can get more arcane than that. Here are some other terms you might encounter in your search.

Omnidirectional—picks up sound equally well from any angle.

Unidirectional—the response pattern is biased toward sound coming from the front, although there are different types of unidirectional mics.

Cardioid—biased toward sound coming from roughly 180 degrees in front of the mic and rejecting noise from behind.

Hypercardioid—similar to a cardioid pattern but with a narrower frontal zone, hypercardioid picks up some sound from directly behind, such as the voice of the camera operator.

Super-cardioid—similar to hyper-cardioid, the response is a little wider in front, with a smaller area of rear sensitivity.

Shotgun—the most narrowly focused of all, sensitive mainly to what's directly in line with the mic, with some sensitivity in the rear and small areas directly to the sides.

tips Shooting Close-Up Photos

1 Get To Know Your Camera

Before you begin hunting for that perfect shot, you should get acquainted with your camera. If you spend money on a digital camera, you owe it to yourself to understand what you are working with. Take time to read through the users manual to learn what your camera has to offer. Familiarize yourself with the camera's settings, including the shooting modes and how to correctly use the flash. Most digital cameras also have a macro mode feature (usually designated by a flower icon) that lets you focus on your subject at a very close range. Check your manual for the camera's closest focusing distance and remember it when deciding how far away to position your camera from the subject.

2 Viewfinder vs. LCD

How many times have you taken a photo using the viewfinder, only to look at the LCD and see half of your subject's face? When looking through the viewfinder, what you see is not always what you get. With most digital cameras, the lens and the viewfinder see the subject at different points. You can easily misjudge this shift in views, especially when shooting extreme close-ups. Therefore, learn to rely on the LCD to frame your shot so you know what to expect as your end result.

3 Focus On Your Subject

There may be times when it is most effective for you to not position your subject in the center of the photo. If this is the case, you will need to lock the focus on your subject because most cameras focus on the frame's center. Many cameras let you do this by following three steps. First, move the camera so the subject is centered and, therefore, in focus. Next, press halfway down on the shutter release button to "lock in" the focused subject and then hold the button as you reposition. Finally, press the shutter all the way down to snap the photo. Hold steady when releasing the shutter because even the slightest movement can cause photos to be blurry or consider using a tripod for planned shots.

4 Let There Be Light

Lighting can either make or break a photo, so it is important to always consider the type of lighting available. Using natural light is always nice, but sometimes using a flash can dramatically improve close-up photos. Experiment with your flash. Don't be afraid to turn on the flash when taking outdoor shots, especially when you may need to illuminate high-contrast shadows on important features such as faces. Get creative with lighting techniques when taking close-ups that are planned shots. Try using a piece of aluminum foil or some white cardboard as a reflector to create an interesting lighting effect.

5 Little Details Can Make A Difference

The good news is that you don't have to be a professional or purchase special equipment to take fabulous close-ups. Sometimes the best photos are captured by simply focusing on the little things. For starters, try mixing it up a bit. Ideally, a good close-up is taken at eye level, but by changing angles, you might capture more personality from your subject. Also, try to select a simple background to eliminate any clutter that will compete for attention. An advantage of using a digital camera is that you have the freedom to experiment. Take multiple shots while using different settings. It may take you 10 tries before you get the perfect shot, but that's OK. And, remember, if all else fails . . . get closer!

BY LINNÉ OURADA

Watch Your Fingers

SawStop Makes Your Workshop A Safer Place

The table saw is one of the most important tools in a woodworking hobbyist's shop, but it's also one of the most dangerous. Let your attention wander for even a second as you guide the wood into the spinning saw blade, and you will lose a finger or two before you can react. Today virtually all table saws lack safety measures that can stop the blade before it rips into a distracted woodworker. But thanks to a physics doctorate's invention, hobbyist, school, and business workshops no longer have to accept this risk.

SawStop 10-inch Contractor Saw
$799
www.sawstop.com

SawStop (www.sawstop.com), a company out of Wilsonville, Ore., dedicated to developing safe technology for woodworking equipment, offers two table saws that can detect skin and stop the saw blade in milliseconds so the woodworker's finger is not cut off. Stephen Gass, a lifelong woodworking enthusiast, cooked up the technology in his workshop, which now doubles as SawStop's headquarters. "I wondered if you couldn't stop that blade fast enough so if you ran your hand into it that you wouldn't get a serious injury," says Gass. "I started thinking about how could you do that, would it be possible, how much force would it take to stop the blade? And about 30 days later, I had a prototype working."

The finger-saving technology revolves around a special brake cartridge that sits just below the saw blade. A microprocessor inside the brake monitors a small electrical current that extends to the edge of the saw blade. The current does not change when the saw chews through the board (even wet wood won't affect the current, according to Gass), but when the blade cuts you, your skin reduces the current and prompts the brake cartridge to jam its aluminum head into the blade. Despite the brake spring's 150-pound force, the head won't damage the blade's teeth. Instead, the blade chews into the aluminum for about three milliseconds and then stops. Thus, if your favorite woodworker touches the blade, it will break the skin, but it won't cut off the finger.

So why isn't SawStop technology in every saw? Saw manufacturers who want to offer the SawStop technology must build it into new saws, and so far, no manufacturers have licensed SawStop. Thus, Gass launched his own table saw builder, also named SawStop. According to Gass, his company contracts with the same Taiwan manufacturer that supplies many big-name brands. The saws are now available through the SawStop Web site. Customers can attach any saw blades to the SawStop table (no need to buy special blades) and can replace a triggered cartridge in about five minutes. (The cartridge is destroyed if the saw cuts someone.)

Of course, there's a price to pay for safety. SawStop saws cost more than the competition's saws. (The cabinet saw costs as much as $750 more than some similar models.) Gass attributes about $150 of that difference to the SawStop technology and the rest to extra features and design improvements. "We figured, if we're going to be more expensive, we'd better darn well make the best saw out there," Gass says. Although customers will appreciate the saws' quality, we suspect the safety feature will weigh more heavily in the purchasing decision. After all, as SawStop.com claims, "It can make the difference between needing a Band-Aid or a hand surgeon." ce

BY JOSHUA GULICK

Flat-Panel TV Placement

Where In The Room Should It Go?

Optimum viewing for an LCD or plasma TV places the center of the screen at eye level when you're seated. It may seem more intuitive to hang the TV on your wall as high as you would a picture because you view it best when you're standing or walking by. But that's not the case with flat-panel TVs. Because of the viewing angle, it's best to sit directly in front of the screen, with the center, as mentioned, at eye level.

BY KATHRYN DOLAN

Furniture For LCD/Plasma TVs

If you're not crazy about mounting your flat-panel TV on the wall, you can set it on a stand or house it in one of the entertainment centers or consoles designed specifically for flat-panel TVs.

For a contemporary look, try Direct Furniture's Plasma/LCD Credenza With Back Panel ($2,499; www.directfurniture.com), which is pictured below on the left.

Hooker Furniture's Sierra Ridge Customizable Wall Unit ($1,999; www.hookerfurniture.com) includes a console and bridge that adjust to the size of your TV, left and right cabinets, and a back panel. It's pictured in the center.

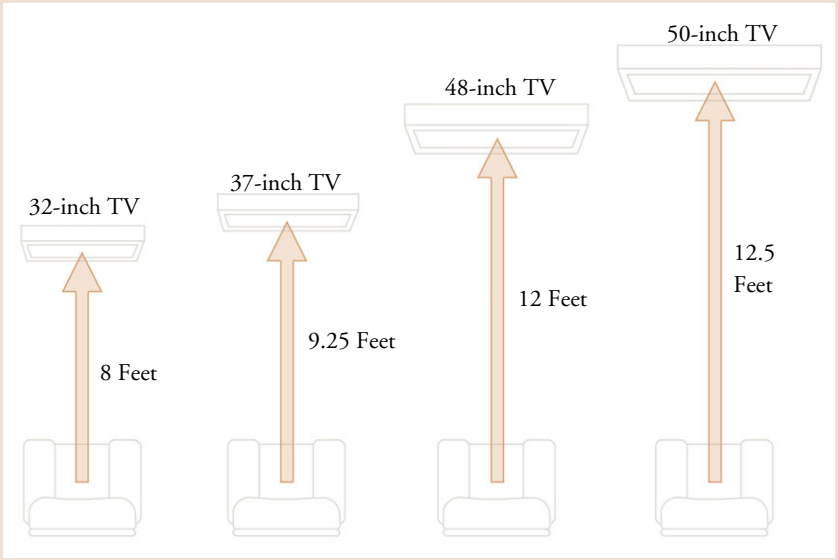
If you have more to spend, the Milano 21 Plasma/LCD TV Wall Unit ($4,895; www.directfurniture.com) is another option (lower right).

The StudioTech R-22 stand ($799; www.studiotech.com), pictured on page 70, provides an alternative if you don't have the space or décor for a cabinet.

Viewing Distance

Is your room long enough to accommodate your big-screen LCD or plasma TV? If you intend to buy a 50-inch TV, plan to sit about 12.5 feet from the screen. Because LCDs have fixed pixels (there are a set number of **pixels**, or picture elements, horizontally and vertically, and they're either on or off as opposed to CRT [cathode-ray tube] technology where the phosphors that make up a pixel glow for a fraction of a second and have to be refreshed constantly), the image may be a little grainy if you sit too close. The Suggested Viewing Distance Calculator at DTV City (www.dtvcity.com/lcdtv/lcdscreensize.html) helps determine the optimal distance at which you should sit for the best viewing.

If you haven't shopped for your new TV yet, you can use the LCD TV Screen Size Calculator to enter the approximate viewing distance between you and the TV. Then, the calculator will give you an optimal TV screen size.



The Fellowship Of The Ringtones

Personalize The Sound Of Your Cell Phone

One of today's latest must-have accessories in our increasingly digital universe is a **ringtone**, a unique sonic signature for your cell phone that can be a melody or a sound effect rather than a generic chirp or trill.

Yes, custom ringtones can be even more obnoxious than the factory-default tones when they play throughout a crowded movie theater. In fact, if ringtones had been around when Whitney Houston's "I Will Always Love You" was fresh, we can easily imagine the resulting mayhem.

But the buying public has spoken. Ringtones aren't just popular; they're currently one of the hottest trends in the music and cell phone industries.

Small Speaker, Big Business

According to figures compiled by New York marketing/consulting firm Consect, ringtones took in $4 billion in global sales during 2004. The U.S. market made up less than 10% of that—around $300 million. Keep in mind, however, that the United States has technologically lagged behind Asian and Western European markets, particularly when it comes to phones capable of playing sample-based ringtones (see the "Tone Types" sidebar for more information about types of ringtones).

Ironically, some buyers that quibble over iTunes' 99-cent cost to legally download an entire song will happily fork

Xingtone is a combination of software and online service that lets you create and upload your own ringtones.

over two or three times that amount for a 20-second excerpt when it comes in the form of a ringtone. In many cases, ringtones outsell complete songs.

Why are ringtones so popular? Chalk it up to three main reasons:

1 **Image.** To everyone in earshot, your ringtone broadcasts a little bit about who you are . . . or who you'd like them to think you are.

2 **Instant identification.** If you have ever been in a meeting or with a group of friends and had to play the "Whose Cell Phone Is It?" scramble, you can appreciate the advantage of playing "Name That Tune" instead.

3 **Caller ID.** If your cell phone has multiple memory slots, you can immediately know which of your friends, co-workers, or family members is after you by programming specific tones to denote each caller.

Shopping for ringtones at Cingular and elsewhere is usually as easy as browsing through tabs and categories.

One Ringtone To Rule Them All?

So, you have a cell phone—that means any ringtone is yours for the picking, right?

Unfortunately, no. As is often the case when multiple manufacturers, media files, and service providers are involved in something, the end user is at the mercy of proprietary formats and technologies, as well as hardware limitations.

It has only been since late 2003 that phones supporting sample-based ringtones have been available in the United States, and most phones predating 2002 don't even support customization of the simpler (and extinction-bound) mono- and polyphonic tones.

After you have browsed through hundreds of selections and found a ringtone you won't mind hearing a dozen times a day, even when it is offered directly by your carrier, first make sure that your phone is new enough to play that ringtone and then verify that it is compatible with your model. Online retailers usually feature lists or pop-up menus to answer compatibility questions, but when in doubt, refer to the manual or check with your service provider.

Adding further confusion, some providers, seeking a captive market, make it difficult or impossible for users to add third-party ringtones. Such blockages can vary not only among providers, but also from phone to phone under

Tone Types

There are three kinds of ringtones from which to choose. What your phone can handle depends on its age, as well as whether you have a bargain-basement model or something a little more deluxe.

Monophonic. Plays one note at a time, although the cheesy electronic tone will render the opening of "Beethoven's Fifth Symphony" with all the grandeur of the soundtrack to Donkey Kong.

Polyphonic. Can play more than one note at a time, with harmonies and rhythms in addition to the melody. But the built-in voicing still sounds cheesy.

As cell phone users replace their older models, mono- and polyphonic tones are going the way of the dinosaur in favor of the third type.

Sample-based. The newest and most sophisticated ringtones, the ones that have fueled the multibillion-dollar craze, aren't just electronic Muzak versions but snippets from the original songs, movies, etc. By using MP3 or some other form of data compression, the provider can deliver a comparatively high-fidelity recording. You might also see these called true tones, master tones, real tones, real music, and so on.

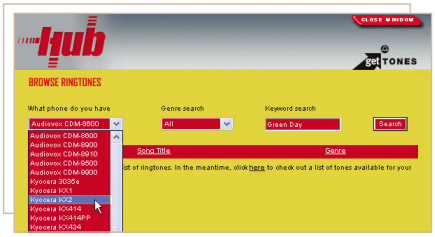
the same provider, so be aware of potential restrictions before investing much time browsing third-party tones.

Ring It Up

If you're in the market for a ringtone, there's no shortage of outlets. Still, begin your hunt with your service provider's Web site. This will ensure the highest likelihood of compatibility and spare you from having to scroll through selections on your phone's browser display.

Let's say you've auditioned audio clips and it's time to buy the winner. Prices vary, but between two and three dollars per ringtone is common. The delivery method also varies, but typically, you'll supply your mobile number, and within several moments, the seller will relay it to your phone by a data transfer protocol such as Smart Message (a type of SMS, or Short Message Service). Therefore, you'll likely need to have wireless Internet and/or text messaging services activated on your service plan.

Can't find the perfect ringtone at your carrier? Two large, reliable third-party outlets are Zingy (www.zingy.com) and



To address questions about your phone's compatibility, check the ringtone seller's Web site for such features as these drop-down menus at Verizon's Hub.

the subscription service Jamster! (www.jamster.com). Around half of all ringtones sold currently come from hip-hop music, so you know they'll be big in the online Store at Def Jam Recordings (www6.defjam.com). There's also a wide selection at MTV.com (www.mtv.com).

But if you want more control, check into Xingtone ($19.95; www.xingtone.com), software that lets you create ringtones from any audio files on your computer and then upload them to your phone (assuming it's supported) through an online connection.

This kind of control is undoubtedly a taste of the future, as new phones eventually will make uploading and assigning your own ringtones a more user-friendly process, with no middlemen required.

BY BRIAN HODGE

Our Favorite Ringtones

It's tough to think of a more subjective roundup than this. Still, each of these ringtones has a certain something that puts it over the top for us. Only one criterion: No contemporary songs. Today's chart-topper is tomorrow's VH-1 trivia question that nobody gets.

Casting Spells (Nextel; www.nextel.com). If you've ever suspected that your gadgets have minds of their own, this one will keep that impression alive and well.

Darth Vader Breathing (Cingular; www.cingular.com). Yes, Chewbacca's studio session was the focus of the "Star Wars Episode III" ringtone TV commercial, but Vader's ominously huffing iron lung commands instant respect.

Group Of Goats On Boat (Zingy). Easily the most surreal ringtone we found, this chorus of dismayed bleating is strangely apropos in our age of uncertainty.

Theme From "The Good, The Bad, And The Ugly" (Jamster!). Instantly transforms even the most mundane call into a spaghetti-western showdown.

Twisted Sister's "We're Not Gonna Take It" (Jamster!). The perfect antidote when you've had one call too many.

Cell Phone Wallpaper

Wherever you find ringtones, you'll probably find wallpaper, too, and digital wallpaper isn't just for your computer anymore. If you're weary of seeing your service provider's logo in your phone display, you can probably slap a new image over it—everything from landscapes to movie stills, from fantasy art to religious iconography.

At most outlets, everything we've covered here about ringtones applies to wallpaper, too. The costs are similar, and they're usually relayed to your phone the same way.

So while you're busy giving your phone a new voice, consider giving it a face-lift, as well.

Three wonders every digital camera owner should experience

KanguruMedia X-change

Get up to 80GB of digital photo storage built for the road. When you've filled your media cards but don't have access to a computer, the Media X-change is the perfect solution! Copy your photos right to this mini hard drive with the push of a button!

Features:

- Works with CF, SD, MMC, Memory Stick, and Microdrive
- Built-in Card Reader
- High Speed USB 2.0
- Portable design & custom carry case
- Driverless on most OS

Kanguru Slim FC-RW

Never run out of storage! The Kanguru Slim FC-RW can provide portable backup or archival abilities for your flash cards while on the road! Burn your pictures directly from your flash card to a CD without a computer!

Features:

- Works with CF, SD, MMC, Memory Stick, and Microdrive
- Backup cards over 1GB
- Play DVDs or view pics on your TV
- Connect to your PC via USB 2.0
- Burn CDs, Play DVDS, View Pictures
- Rechargeable battery

KanguruQuickSilver Hard Drives

Run out of room for your photos on your computer? Store them on this sleek, high quality external HD. Excellent performance that looks great on your desktop too!

Features:

- Up to 400GB of storage
- Store thousands of digital photos
- High Performance 7200RPM Drives
- USB 2.0 or FireWire/USB 2.0
- Alloy design dissipates heat
- Withstands up to 200G of shock
- Vibrant Blue Kanguru LED
- Stands vertical or lays flat

Available at:

KANGURU Solutions™

www.kanguru.com
Call: 888.KANGURU

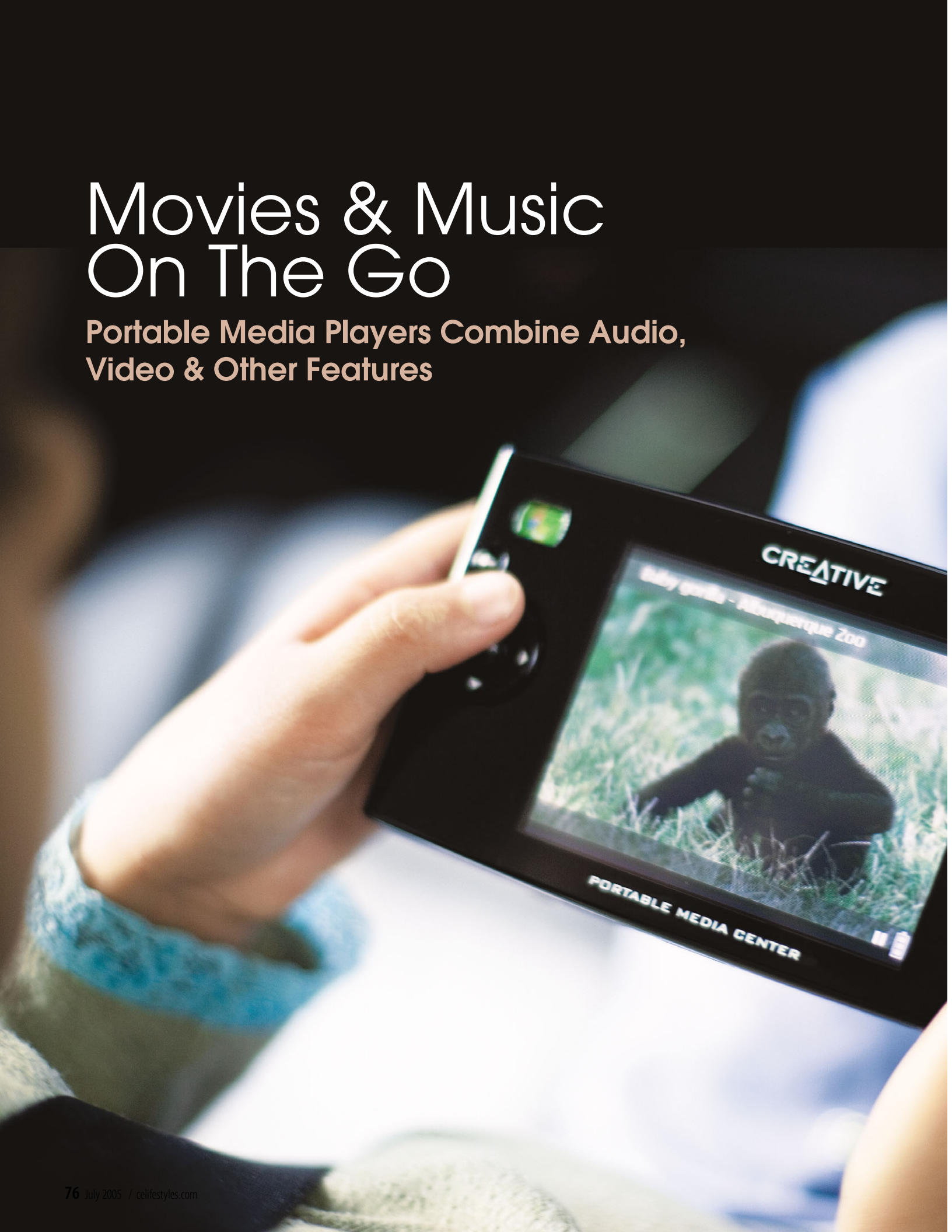
PC Connection®

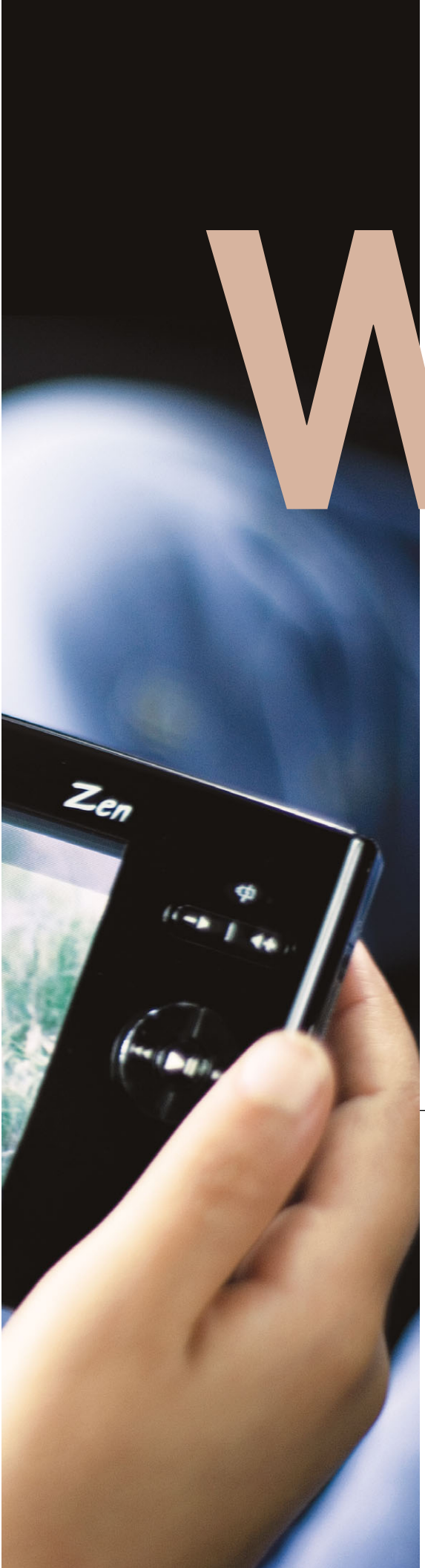
www.pcconnection.com
Call: 800.800.5555

Photo courtesy of Omar Attum Photography and stored on a Kanguru Media X-change.
"Insert the memory card into the Media X-change, push copy, and the photographs are downloaded. I then transfer the photographs from the Media X-change to my laptop... It's that simple!" - Omar Attum

Movies & Music On The Go

Portable Media Players Combine Audio, Video & Other Features





When CES (Consumer Electronics Show) kicked off 2005, much of the buzz surrounded a category of devices known as portable media players, the hottest new way to experience media on the go. Sure, ask a random sample of people walking down the street today what they think of when they hear of portable media players, and you might receive mainly blank looks. Describe portable media players as souped-up MP3 players, and you'd likely hear the name "iPod" more than once. But this next generation of MP3 players does much more than just play music files, and Apple, the creator of the iPod, is far from the only developer on the scene.

70% of online users listen to music on PCs.

The newest portablemedia players are devices that play music files, store photographs, display DVD movies and TV shows, and carry a variety of other features; you may even see them with cell phone or GPS (global positioning system) capability in the near future. Slightly larger than traditional MP3 players, due mostly to their screens designed with video play in mind, these devices constantly are being enhanced and upgraded.

Bright, Crisp & Colorful

We aren't talking about grainy, hard-to-view pictures and video, either. For example, take a look at the Creative Zen Portable Media Center ($499.99; www.creative.com). The 3.8-inch display is a TFT (thin film transistor) LCD, a type of flat-panel screen that is faster, brighter, and more colorful than its passive-matrix counterparts, and it has a resolution of 320 x 240 pixels, which is perfectly acceptable for viewing still images and video clips.

And there are some exciting developments taking place in this arena. Ovideon recently released the AVIAh portable multimedia theater ($599; ovideon.com), featureing an OLED (organic light-emitting diode) display. At 2.2-inch diagonal screen size, the display is smaller than most of its competitors, but the resolution is higher (521 x 218 pixels), and Ovideon claims the colors and contrast significantly outshine LCDs.

Almost simultaneously, driven in part by advancements in display technology, we're starting to see new content categories emerge. Jason Gordon, product

Microsoft & TiVo

What do you get when you team up one of the biggest names in computing with one of the biggest names in television? A service that began making news before the public ever saw it. In January TiVo and Microsoft announced that TiVo would begin rolling out the TiVoToGo feature, a service that lets subscribers using the TiVo Series 2 DVR (digital video recorder) easily transfer recorded shows to a Windows XP PC. And in the next few months, users could then transfer these programs from a WinXP PC to Windows Mobile-based portable media devices. Subscribers connect a TiVo Series 2 DVR to a home network, transfer shows to a WinXP PC, and use the Windows Media Player software to transfer the shows to portable media devices, smartphones, or Pocket PCs. The collaboration is in "internal beta" testing, says Microsoft spokesperson Jason Gordon. Expect to see public beta testing in the next couple of months. ●

51% of online users are interested in recording PC-based TV shows for later playback . . .

manager at Microsoft, notes that when companies began releasing portable media players, "people loved the video, but they wanted more content."

Content Rich

So Microsoft has joined the act. The company licenses its Windows Mobile technology for use on portable media devices such as the Samsung YeppYH-999 ($499.99; product.samsung.com), the iRiver PMC-120 ($499.99, www.iriver america.com/prod/multi/pmc_120.aspx), and the Creative Zen portable media centers. Users of devices that run this OS download content from a range of Microsoft content partners, including MSN Video Downloads and CinemaNow, to their Windows XP PCs and then transfer content from their WinXP PCs to their portable media players. They can do the same with television (by using a TV tuner card or WinXP Media Center Edition PC's built-in personal video recorder), home movies, music videos from MediaPass, and even photos stored on a PC and managed with Windows Media Player 10.

Portable media players do more than display photos; some of them capture photographs, which you can then set to music. Say hello to the Olympus m:robe 500i ($399.99; www.olympusgroove .com). Olympus, better known among consumer electronics aficionados for its digital cameras than its media players, has combined a 1.22MP (megapixel) digital camera with a digital music player. You can shoot and display pictures on the 3.7-inch TFT color LCD touchscreen and then create a portable slideshow by setting them to any of the

. . . and 40% of online users are interested in watching PC-based live TV programming on their TVs.

approximately 5,000 MP3 or WMA (Windows Media Audio, a format developed by Microsoft to compete with the popular MP3) files you can store on the 20GB hard drive.

Now a 20GB hard drive can hold a lot of photographs, but developers aren't satisfied there, especially when the portable media player is designed with video in mind. As consumers become accustomed to the idea of recording and storing video on their portable media players and then attaching the devices to TVs for big-screen playback, it's a good bet that developers will be working on increased storage capacity. In fact, to see what may someday head our way, look overseas to Citiwide Technologies (www.citi-wide.com.hk). The company's new MP4-010 (no price available in the United States) portable media player, which currently is available only in Hong Kong, has a removable 80GB hard drive.

Removable hard drives have landed on these shores, however. David Novak of VWB (Video Without Boundaries; www.vwbinc.com) predicts that along with screen and processing capabilities, storage is one of the three key elements where we'll see major innovations in the United States in the coming months. VWB recently introduced the Media-READY Flyboy Personal Media Player ($349), a Linux-based player that has a 40GB removable hard drive. This hard drive can hold approximately 80 hours of video, 200,000 digital pictures, or 740 hours of MP3 songs.

99% of PCs have at least one video file.

The Life Of A Battery

The 80 hours of video won't do you much good if your battery doesn't last long enough for you to watch one or two DVDs on a long plane trip, though, so that's another area in which we have seen change. These days, hard drive-based players are winning the race in the portable media market because, on average, they hold more content than flash-based players. But, one of the biggest advantages to flash-based players is that they typically have longer battery life.

For example, the iRiver iFP-899 ($199.99; www.iriveramerica.com), a flash-based MP3 player, can run for 40 hours on a single AA battery. Compare this to the iRiver PMC-120 ($499.99), which holds up to five hours of battery life when playing video and 14 hours when playing audio, and you can see the challenges hard-drive-based portable media players face.

To Spend Or Not To Spend

Given all the added features in today's portable media players, another major difference between the two types of devices is cost. If you're looking for a device that can play your favorite MP3 tunes, you can spend less than $200 on a 4GB iPod mini. If you're considering investing in a portable media player that displays video or photographs, you can expect to pay, for example, $499.99 for the Creative Zen Portable Media Center. The good news is that as manufacturers, researchers, and developers continue to improve their products and more consumers begin to buy them, the prices are likely to continue dropping, as well.

Another change we might see in the portable media player market is in you, the audience. When Jason Gordon, product manager at Microsoft, was asked who he saw as his company's target audience, he said originally the market was "bleeding edge" users, but he's now seeing a transformation to a broad set of consumers. He also says the folks who could soon be using portable media players en masse are the employees who commute to work by train or moms who hand their kids the player to entertain them while driving to the grocery store. But what is clear is no matter who's using the devices, the next generation of users will be able to take advantage of portable media players that do much more than play music. ce

BY HEIDI ANDERSON

Cool Peripherals

Sure, some portable media players have built-in speakers, but they aren't known for superior sound quality. Altec Lansing is, however, and that's why we recommend you take a look at the Altec Lansing inMotion iM4 ($99.95; www.alteclansing.com).This portable, battery-operated amplifier plugs in to your portable media player, so you and those around you can listen to your audio through sleek, silver and black speakers. Place your portable media player on the device's base and plug in a retractable audio cable. Soon, you'll be listening to sounds through a Class D amplifier (the most efficient type of amplifier) powering four full-range micro-drivers. The setup is highly portable—the device weighs 28 ounces and folds into a 10.25 x 5.3 x 1 inch package—and it will run for more than 18 hours on four AAA batteries. ●

tips

CE Outside

1 Read The Manual

Before heading to the beach or hiking in the Grand Canyon this summer with your electronic toys, read the instructions to find out how fragile or durable your devices are. See what parts are prone to malfunction in extreme temperatures; if they are waterproof or water resistant; how much vibration they can handle; and how much protection they need, such as a padded case, a leather purse, a nylon backpack, or a Ziplock bag. The manual should also tell you if they will shatter on impact or bounce and not break if they are dropped. Find out what conditions your electronics can handle and then take precautions to protect your equipment.

2 Check The Temperature

Excessive temperatures, high or low, are never good for electronics. If your electronics must remain inside your car, put them in the trunk or on the floor in a shaded area instead of on the seat where direct sunlight would increase the heat on them. Cover them with light-colored towels and crack a window. You could also leave smaller devices (in their cases) inside a cooler with a small, waterproof pack—no larger than about 3 x 5 inches—of blue ice, if possible.

3 Watch Out For Water & Humidity

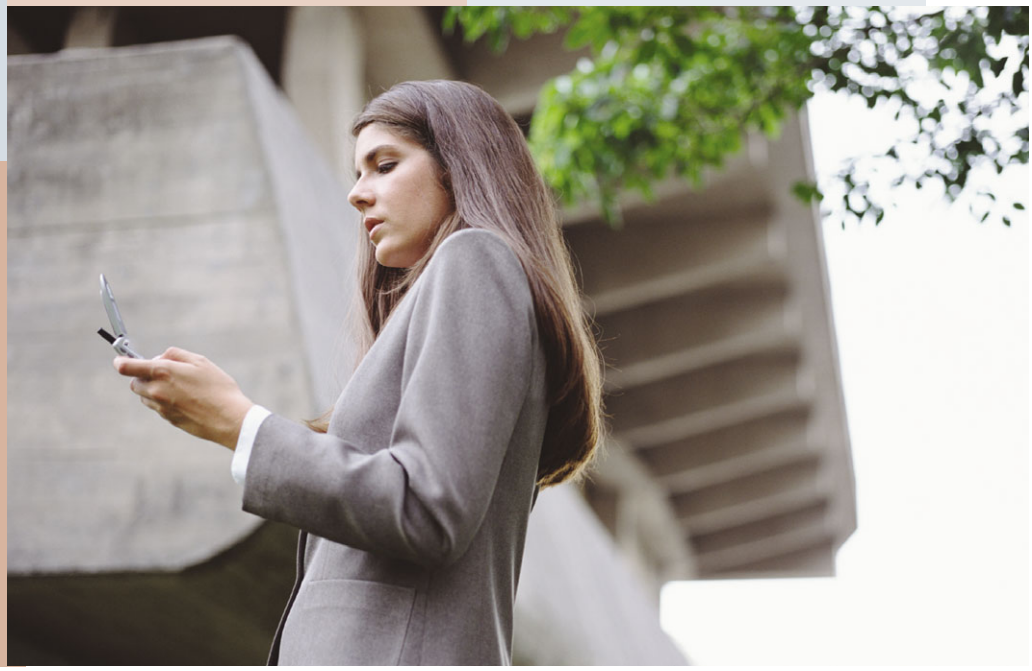
Rain, mist, fog, and even humidity are enemies of your electronics. Put your equipment in a case whenever you aren't using it and choose a waterproof case if you anticipate carrying it in a moist environment. Store items such as film, extra batteries, CDs, DVDs, cell phones, and other small electronics in Ziplock bags or plastic storage containers if you need to carry them through the rain or if they are stored in a place with high humidity. Electronics are particularly vulnerable to anything wet, including beverages, colognes, and chemicals, so don't use your electronics around liquids that are in a container you could spill.

4 Keep It Clean

Sand, dirt, dust, pollen, insects, and food can make buttons and keys on entertainment devices, cell phones, cameras, and computer keyboards stick and malfunction, so take precautions to keep your electronic equipment clean and sanitary. Bring a box of Handi Wipes or some paper towels outside with you to wipe off hands, tables, or CE surfaces and cases if they get sticky or dirty.

5 Play Safely

If you need to use an extension cord when you bring your CE outside, use one that is clearly labeled for outdoor use and that has a three-prong connector—two blades and a grounding pin to prevent electric shocks. Also, never overload your circuits; double-check to be sure the total power supply needs for the devices you want to use don't add up to more watts of power than your outlet can provide. A surge protector that has six outlets may not be able to power six devices, so check carefully and always remember: safety first.



BY JULIE SARTAIN

First Glimpse Advertising Section

This special advertising section presents the latest consumer electronics products now coming on the market.
Browse through these First Glimpse pages to learn about new products before they appear on your local store shelves.

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AROUND THE HOME

Roxio Easy Media Creator 7.5	98
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Lexar JumpDrive Lightning	100
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Advertisement

JVC TH-C5 DVD Digital Theater System
MSRP: $439.95
www.jvc.com

Complete Home Theater

This complete home theater system includes a slim-design, silver DVD receiver with a progressive scan five-disc DVD changer and an amplifier that delivers 1002W of total power. It also has built-in Dolby Digital/DTS/Dolby Pro Logic II decoders, as well as two wood floor-standing front tower speakers and a powerful 10" subwoofer.

Other Key Features:

- 5.1-channel Dolby Digital, DTS, and Dolby Pro Logic II decoders built into the system
- Playable formats: DVD-Audio/Video, DVD-RAM, DVD-R/RW, CD, CD-R/RW, SVCD/VCD, MP3/WMA/JPEG
- VFP (Video Fine Processor)
- Variable Search Slow (Forward/Reverse)
- Resume function
- Magnetically shielded front/center speakers
- DVD-Audio/WMA playback
- 5-disc changer digital theater system with 1000W
- Digital Direct Progressive Scan Output for smooth and high-resolution pictures
- DVD-RAM playback

Advertisement

- DVD Express Play Start
- Omni-Directional Surround Speakers for a wider sound field and realistic acoustic ambience
- Floor-standing front/surround speakers and two-way center speaker
- All Channel Stereo mode
- Large two-way center speaker with punched metal grille
- Large 9-7/8-inch powered subwoofer
- Multi-brand TV & VCR remote control with sliding lid for easy, integrated control

JVC
The Perfect Experience

Advertisement

JVC DR-MH300S Digital Recorder
MSRP: $699.95 (Available in July)
www.jvc.com

A Great Addition To Your Home Theater

JVC's DR-MH300S combines the DR-M100 DVD-R with a 160GB hard drive into a single deck that provides extraordinary versatility. Among the new features this year in all JVC hard drive recorders is a new TV Guide On Screen program guide, an easy-to-use guide that allows users to simply select favorite programs for one-time, every-episode, or every-week recording. The DR-MH300 also offers JVC's HDMI Direct Output, which provides a single cable for carrying digital video and audio signals to HDMI-equipped displays and AV receivers.

For advanced HDD to DVD dubbing, the DR-MH300S offers JVC's original freezeless-editing technology, which prevents DVD-dubbed scenes from being overcut or undeleted and eliminates any freezing up that is typically found in conventional recorders. The DR-MH300S adds additional flexible-editing capabilities, including high-speed dubbing (64X max)

Advertisement

that permits a one-hour program to be dubbed to a DVD-R disc (8X speed) in approximately one minute.

The DR-MH300S can pause a live recording and provide several simultaneous recording and playback options, recording on the hard drive while playing back from the hard drive or DVD, or recording on DVD while playing back from the hard disk. Editing using the DR-MH300 DVD Navigation system is made simple with its user-friendly thumbnail image system that makes it easy to find the desired scene. Editing from the hard drive to DVD is as simple as creating a playlist. Dubbing is just as easy: Just select the desired scenes and press Enter.

JVC
The Perfect Experience

Advertisement

Sennheiser PXC 300
MSRP: $219.95
www.sennheiserusa.com

The Ideal Travel Companion

The foldable PXC 300 headphones with NoiseGard Advance active noise-cancelling technology let you enjoy music even in noisy environments. They reduce unwanted noise by up to 80%, and the optimized circuit technology ensures reduced susceptibility to mobile phone interference. The PXC 300 is supplied complete with a protective soft case, batteries, and aircraft audio adaptors.

Other PXC 300 Features Include:

- Closed, supra-aural stereo mini-headphones with switchable NoiseGard Advance active noise-cancelling technology
- ACT (Advanced Circuit Technology): reduces susceptibility to mobile phone interference due to optimized circuit technology

Advertisement

- Ideal for air travel and noisy environments
- Patented folding mechanism and protective soft case for storage and transportation
- Ultra-lightweight design with ergonomic headband, two-point suspension, and soft, high-quality ear cushions for improved passive attenuation and superb wearing comfort
- Duofol diaphragms with spiral embossing deliver transparent and lifelike audio reproduction
- Excellent sound quality with deep, powerful bass performance
- Supplied with two adaptors for in-flight entertainment systems
- Includes protective soft case

SENNHEISER

Advertisement

Sennheiser RS 130
MSRP: $169.95
www.sennheiserusa.com

Wireless Surround Sound Experience

The RS 130 wireless RF headphone system with switchable surround sound is an ideal choice for both hi-fi and TV use. The lightweight RS 130 lets you enjoy freedom of movement from any audio source. In addition, the transmitter features a convenient metal stand for storing and recharging the headphones.

Other Features Include:

- Open, circumaural wireless stereo RF headphone system
- For hi-fi and TV use
- Switchable SRS surround sound mode
- Intelligent auto-tuning with memory function

Advertisement

- Self-learning automatic level control provides optimum signal reception
- Very lightweight headphones, extremely comfortable to wear
- Easy recharging: simply hang the headphones onto the charging cradle
- Rechargeable NiMH batteries included
- Transmitter can be wall mounted
- Operating time is approximately 22 hours
- Two-year warranty

SENNHEISER

Advertisement

Altec Lansing inMotion iM7 Portable Speaker System
MSRP: Forthcoming
www.altec-lansing.com

Your iPod Speaks Volumes—Anywhere You Go—With Altec Lansing's inMotion iM7 Speaker System

Why should all the music on your Apple iPod stay stuck inside your head? Altec Lansing's new inMotion iM7 Portable Speaker System lets you rock the room, beach, or backyard with the tunes from your iPod, iPod mini, or iPod photo. With AC power or batteries, an easy-carry handle, and accessories such as a shoulder pack, you're free to be "in motion" whenever the spirit moves you.

The iM7 pumps out the biggest and fullest sound this side of your home stereo system, thanks to patent-pending digital amplification technology and a classy chassis packed with more drivers and more power than any other iPod speaker system today.

Two 1-inch tweeters, two 3-inch midrange drivers, a 4-inch side-firing subwoofer, a 4-inch passive radiator, and

Advertisement

Altec Lansing's advanced engineering deliver the goods. The result: big bass, clearly distinguished mids and highs, and room-filling sound from every track, whether it's Bruce Springsteen, Celine Dion, or Yo-Yo Ma.

Just park your player in the dock and let the music play while your iPod recharges. The wireless remote provides across-the-room control of on/off, volume, bass, and treble, as well as iPod song navigation.

ALTEC LANSING®
inMotion™
PORTABLE AUDIO

Advertisement

Get Your HDTV The Easy Way

Humax's HFA100 digital television set-top receiver lets you watch free, over-the-air DTV and HDTV programs that are broadcast with digital sound. The HFA100 receives and decodes all approved ATSC (Advanced Television Systems Committee) digital TV program formats. It has a built-in EPG (electronic program guide) display for each channel, a self-guided setup, and a full range of analog and digital video and audio connections for your TV and home theater.

The HFA100 is the first of its kind to alleviate the complexity once associated with using similar products. Incorporated are: an intuitive on-screen set-up guide, seven-day EPG, automatic channel scan that identifies and assigns all available HDTV channels into the unit's memory, direct channel access, and aspect ratio and parental lock out controls.

The unit is compatible with the many different ATSC digital TV formats and, in order to match the native resolution of the display device used, offers selectable output resolution including 1080i, 720p, and 480p. A Dolby Digital optical output ensures easy and pure connection to surround-sound amplifiers and processors for the best possible sound and movie effects reproduction. Equipped with Component Video, RGB, and HDMI with HDCP outputs, the unit is compatible with most HD-ready monitors and display devices, regardless of brand.

Key Features Of The Humax HFA100 Include:

- Terrestrial ATSC HD receiver compatible with all ATSC formats

Advertisement

Humax HFA100
MSRP: Forthcoming
www.humaxusa.com

- Entry-level price point with top quality build and features
- Ideal for the millions of ED and HDTVs without a tuner for free, off-air HDTV reception—you'll just need an indoor or outdoor antenna
- Extremely easy-to-use EPG with customization options (full screen and small screen)
- On-screen guided setup

Multiple Connectivity Options:

- HDMI output with HDCP
- RGB output
- Component Video output
- Dolby Digital output
- Simultaneous digital HD and analog (S-Video) output for multiroom and/or multiset display of content
- User-selected resolution output
- Small footprint allows easy placement
- Autochannel scan provides easy setup

HUMAX
EASY DIGITAL™

Advertisement

Denon DVD-3910
MSRP: $1,499
www.denon.com

Reference-Quality Universal DVD Player Performance

The DVD-3910 includes virtually all of the advanced features, image enhancement technologies, and audio benefits first introduced in Denon's acclaimed DVD-5900 DVD player, all for a significantly reduced price of $1,499 (suggested retail). To ensure unsurpassed digital video image reproduction, for instance, the DVD-3910 features dual discrete analog devices—one for the progressive scan video circuit and one for the interlaced circuit.

The player also delivers the ultimate in audio performance, with full digital bass management for high-resolution audio formats provided by dual Analog Devices SHARC processors, along with built-in Dolby Digital and DTS surround sound decoding. Performance is enhanced further through using leading-edge 192kHz/24-bit audio D/A converters, along with the latest version of Denon's exclusive AL24 Processing Plus circuit, which now operates in 24-bit/192kHz on all channels,

Advertisement

using sophisticated interpolation algorithms and digital filtering to improve low-level resolution and dynamic range. In addition, it incorporates FireWire audio outputs (PCM/DSD compatible).

Adding yet another level of utility and convenience, the DVD-3910 features the latest version of Denon's proprietary Denon Link technology. When connected to a Denon receiver with Denon Link functionality, such as the AVR-5803, the receiver can accept digital audio data directly from the DVD player's transport sections for the ultimate level of sonic performance. The data can then be decoded and processed by the receiver's digital electronics for the absolute highest level of audio quality available today—with full digital bass management.

DENON

Advertisement

Marantz ER2500 Home Theater System
MSRP: $1,099
www.marantz.com

Great Sound & Style In One Package

Styled by Marantz for your life. Designed by Marantz for your critical eye and ear. If you hadn't thought about a "step up" lifestyle system before, begin now.

The ER2500 Home Theater System combines a unique Marantz surround sound receiver/DVD player with speakers that are at once stylish, functional, and, above all, fully capable of introducing you to Marantz-level performance. There's no "wimp factor" involved, either. Each of the seven internal amplifiers produces 100W of output.

Thanks to efficient digital circuitry, the amplifier stages run much cooler than you might expect for longer trouble-free operation. There's a built-in AM/FM tuner as well as inputs for

Advertisement

three external audio and two A/V sources. The progressive-scan DVD player features a high-speed video D/A converter. Audio conversion is fully ready for high-definition 192kHz/24-bit sources, too. Advanced microprocessors handle a variety of surround formats, as well as assure that the ER2500 handles your favorite disc types. The five satellite speakers sport a stylish cylindrical shape (real wood enclosures, of course), while the arch-shaped subwoofer goes almost anywhere. The ER2500 system is the epitome of stylish convenience, not to mention extraordinary sound quality.

marantz®

Advertisement

Roxio Easy Media Creator 7.5
MSRP: $99.95
www.roxio.com

Digital Success . . . Expanded

With the launch of Easy Media Creator 7.5, Roxio, now a division of Sonic Solutions, has made the best even better. The latest version of Roxio's award-winning digital media software combines technologies from both Roxio and Sonic into the most comprehensive suite of CD- and DVD-authoring and burning, photo, video, and music applications on the market. Easy Media Creator 7.5 offers exceptional value to consumers who want to create, manage, share, and preserve their personal digital content.

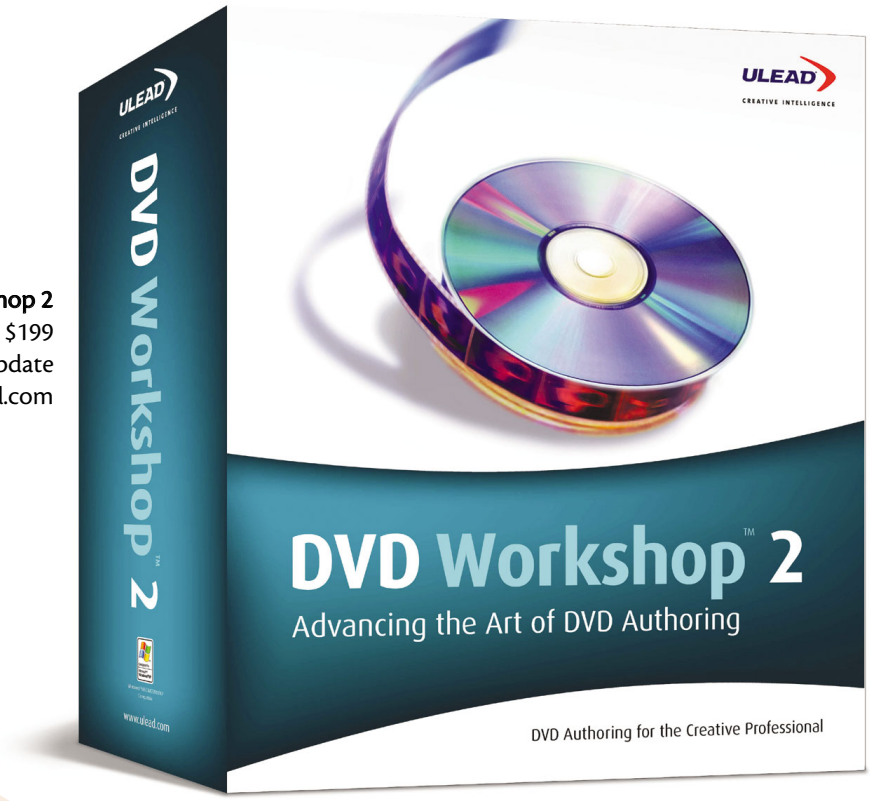
In addition to Roxio's PhotoSuite 7 Platinum, VideoWave 7 Professional, DVD Builder, Disc Copier, and Creator Classic, Easy Media Creator 7.5 also includes some of Sonic's award-winning applications: Backup MyPC Deluxe 6, for comprehensive data protection and disaster recovery; MyDVD Slideshow, for fast and efficient creation of DVD slideshows from still photos; and CinePlayer 2, for high-quality playback of DVD-video content. In response to strong consumer appetite for music downloads, Internet radio, and portable music players, Easy Media Creator introduces new audio features, such as an LP And Tape Assistant that streamlines the conversion of analog recordings to digital, an Easy Audio Capture utility that provides a quick and effective way to record audio such as Internet radio broadcasts, and an enhanced Sound Editor that now provides features for the precise manipulation of audio files and the creation of mixes.

Other new features in Easy Media Creator 7.5 include a Disc Image Loader that enables users to mount disc image files in a virtual drive as if they were discs in a physical drive; a DivX-to-DVD Creator that makes it easy to convert DivX content to DVD for playback in the living room; DVDInfo Pro, for testing the performance of drives and media; and support for LightScribe Direct Disc Labeling Technology in Label Creator, the suite's disc and label artwork creation component, and support for Media Center PC PVR files.

roxio

Advertisement

Ulead DVD Workshop 2
MSRP: $395; $199
for update
www.ulead.com



Innovative Workflow & Design Approach

Ulead DVD Workshop 2 is professional, design-centric DVD-authoring software, making it the fastest, most productive DVD-authoring tool on the market. The intuitive design and powerful navigation tools allow you to be creative with your menus and precise with your authoring without having to rely on additional programs. Capture and encode any video to superb-quality MPEG, create playlists, and add multiple subtitle and audio tracks, complete with Dolby audio. Using still and moving images in a variety of formats, you can compose dynamic DVD motion menus. You can also preview menus, as well as archive data files on the disc and output to DLT or DVD-9 with MacroVision or CSS encryption.

ULEAD
CREATIVE INTELLIGENCE

Advertisement

Lexar JumpDrive Lightning
MSRP: $299.99 (2GB model)
www.lexar.com

Lexar's JumpDrive Lightning Strikes With Top-Of-The-Line Capacity, Blazing Speed & Dazzling Design

Lexar's JumpDrive Lightning, the latest addition to its vast line of USB flash drives, combines powerful read and write speeds and massive 2GB storage capacities to provide first-class portable data storage and transfer capabilities, all wrapped in a striking design.

JumpDrive Lightning is unrivaled in terms of capacity, software functionality, and design. With a distinctive stainless-steel casing, JumpDrive Lightning is capable of an impressive read/write speed rating of 120X (18MB per second) minimum sustained write speed capability and 160X (24MB per second) minimum sustained read speed capability. It's ideal for business professionals, power users, and anyone looking for high-performance storage, portability, and the ability to save and carry large amounts of digital pictures, music, presentations, or any other data files.

JumpDrive Lightning also provides data security and file synchronization, with flexible options to help keep important data safe and protected, even if the drive is lost or stolen. JumpDrive Lightning creates both password-protected and public areas on the drive. The public area is accessible by

Advertisement

anyone using the JumpDrive, while the private area is password-protected and also encrypted with 256-bit AES. This makes it possible for users to easily share files, while at the same time securely limiting access to sensitive or private information.

For added convenience, JumpDrive Lightning easily synchronizes files between a PC and the JumpDrive, putting the most current data at users' fingertips at all times. In addition, convenient setup preferences can include or exclude subfolders or filter specific file types to be synchronized.

The portable JumpDrive Lightning will also be available in 512MB and 1GB. The 2GB capacity maintains top read/write speeds. All capacities are compatible with Windows 2000/XP.

Lexar™

Advertisement

Lexar LDP-200
MSRP: Starting at $49.99
www.lexar.com

Lexar's Portable LDP-200 Digital Music Player Makes It More Affordable To Enjoy Unlimited Music Storage & More

Lexar is helping change today's portable music experience with the LDP-200, a compact, stylish, and affordable digital music player that provides users with unlimited music storage using multiple SD cards. The award-winning player (just $49.99 without cards) is one of the few portable music devices on the market that uses the convenient and affordable SD memory cards, giving users more flexibility in both storing and managing vast portable music collections. In addition to using the removable SD memory cards to manage complete music collections, the LDP-200 also doubles as an SD card reader, making it a handy data transfer device.

The LDP-200 joins Lexar's full line of popular digital music players, including the LDP-800, LDP-600, and LDP-400, all supporting both MP3 and WMA music formats. The LDP-200 is distinguished by its slim, pocket-sized design and is compatible with Microsoft Windows media DRM for playback of downloaded songs from online music services.

Advertisement

Catalog Your Music Library On Multiple SD Cards

The compact and easy-to-use LDP-200 digital music player features a convenient and simple management system, with maximum versatility and portability. The inexpensive SD cards make it possible to easily store entire music libraries, cataloging selections on multiple cards by artist, genre, favorites, musical era, and whatever else users can think of.

The Lexar LDP-200 is available in four different configurations, including a standalone version without an SD card, as well as versions with 256MB, 512MB, and 1GB bundled SD cards, at suggested retail prices of $89.99, $109.99, and $149.99, respectively.

Lexar™

stay
connected
consumer electronics
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At first look you are awestruck by the beauty of Sanus Component Furniture. And when you investigate deeper you see the strength of aluminum pillars blended with the character of solid hardwoods and unique features like tempered glass shelves and a wire management system. Component Furniture includes cabinets, armoires and digital TV stands that configure to your exact needs. Add the Sanus Convection Cooling System that allows air to flow around heat-generating A/V gear like a cooling canyon breeze and you have Component Furniture that echoes of quality and performance.

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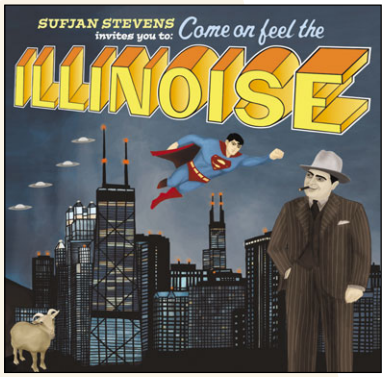
800.359.5520 www.sanus.com

music & movies

music

BY ELIZABETH DIXON



Sufjan Stevens

"Illinois"
$13.99 • Available: July 5

Perhaps one of the most inventive and ingenuous musicians of our time, too-little-known Sufjan (pronounced Suf-yan) Stevens is back on the scene this month with "Illinois." The album is the second in his bold quest to document, in song, the 50 United States; "Greetings From Michigan" was first in the series.

On the list of NPR's "All Songs Considered: The Best Music of 2004," Stevens' last release, "Seven Swans," will be a tough act to follow. Still, his keen originality and remarkable creativity continue to shine on "Illinois." His skillful guitar and banjo picking are impeccably timed. It's peppy without the pop. He's not stingy with the music either; this album sports 22 tracks.

This is the best music you've never heard.

Van Morrison

"Magic Time"
$17.98 • Available: Now

What can we say about Van Morrison, a classic singer/songwriter of our time? His more recent albums haven't displayed the timelessness of "Moondance" or "Tupelo Honey," but Morrison shows in "Magic Time" that he still has the class to impress even the most nostalgic brown-eyed girl.

Coldplay

"X&Y"
$18.98 • Available: June 7

If their first two albums are any indication, it's doubtful that Coldplay will disappoint with its third release "X&Y." It's hard to deny these Brits' talent, as their last albums have successfully covered the musical gamut. Think U2 (minus the cultural clout) with a hint of Radiohead; sounds great, less filling.

Gomez

"Out West"
$18.98 • Available: June 7

Hailing from the UK, this dynamic group spreads their contagious energy with "Out West," their recently released two-disc live album. It's hard to classify Gomez in any distinct genre; their music hits the mark on many levels. The oomph gets you going; the lyrics make you stay.

Frank Black

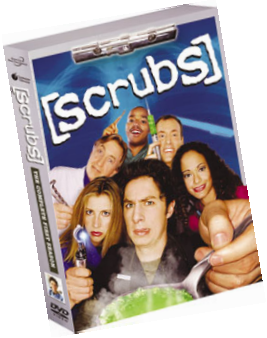
"Honeycomb"
$16.98 • Available: July 19

Pixies' frontman goes solo once again with the release of "Honeycomb." The critics are calling the album mellow, signaling a change from the typical Black fare. While he's an artist that's hard to define, change and innovation are more often than not the makings of a memorable album.

BY SAMIT G. CHOUDHURI

"The Life Aquatic With Steve Zissou—The Criterion Collection"

$29.99 • Available: Now
We saw director Wes Anderson make a name for himself with "Rushmore" and then again with the "The Royal Tenenbaums." And now we have "The Life Aquatic With Steve Zissou." Old Anderson staple Bill Murray turns in a Jacques Cousteau meets Captain Ahab meets a zany Bill Murray performance as the bizarre Steve Zissou in his hunt for a mythical shark responsible for the death of his best friend. In this surreal world, we follow Zissou's most dangerous seaborne expedition with a crew including his supposed long-lost son (Owen Wilson) and a cast of equally odd shipmates, played by the likes of Cate Blanchett, Anjelica Huston, and Willem Dafoe. Not surprisingly, the Portuguese, all-Bowie soundtrack seems to be a natural fit for another eccentric Anderson outing. Ultimately, the meandering storyline resolves itself, but with an effort on the part of the viewer.



"Scrubs: The Complete First Season"

$49.99 • Available: Now
"Scrubs" is one of very few intelligent and humorous live-action sitcoms being broadcast today; it's a welcome reprieve from the overwhelming barrage of reality television currently crowding the airwaves. Lead character John "J.D." Dorian (Zach Braff, who recently wrote, directed, and co-starred in the acclaimed "Garden State") is one of a group of residents at Sacred Heart Hospital. The antics of all involved lend an aura of comedy and drama as you root for these young doctors. Plus, you probably won't be too excited about going to med school after watching the hardships Dorian and his crew have to endure.

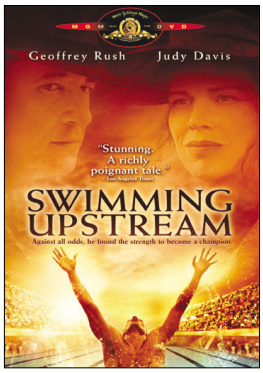
"The Sea Inside"

$27.95 • Available: Now
From director Alejandro Amenábar comes "The Sea Inside." Winner of the Academy Award for Best Foreign Language Film of 2004, the movie is based on the true story of Ramón Sampedro (masterfully portrayed by Javier Bardem), a quadriplegic man who was able to move nothing but his facial muscles for three decades after an accident as a young man left him paralyzed from the neck down. The story follows Sampedro's petitions to the Spanish government for his right to be euthanized. You will sympathize with his quest to die while also seeing a multitude of reasons for him to live as he changes the lives of those around him. The conflict you will feel is all real, and beauty will move you on many levels, perhaps even in spite of yourself or any preconceived notions you have on the topic. "The Sea Inside" is a beautiful journey that inspires and reminds us to be thankful and joyful for what we have already.

"The Aviator" (2-Disc Widescreen Edition)

$29.95 • Available: Now
This 170-minute biopic on legendary aviator and billionaire Howard Hughes is lengthy but never boring. Director Martin Scorsese uses his skills to craft an epic film that focuses on the man before he became a celebrity, through a point prior to his dip into the phobias and OCD that turned him into a complete recluse. The film is slightly romanticized, but then again, it's not a documentary. Leonardo DiCaprio pulls off his role as Hughes with finesse. The film received 11 Academy Award nominations (including Best Picture, Screenplay, Actor, and Director).

other notable releases



Swimming Upstream

Available May 31. Set in Brisbane, Australia, in the 1950s, this sports biopic shows how a son makes his way past an abusive, overbearing, alcoholic father to become the Australian breaststroke champion. It is worth watching for the winning performances by Geoffrey Rush and Judy Davis as the parents of swimming champion Tony Fingleton.

Moonlighting: Seasons 1 & 2

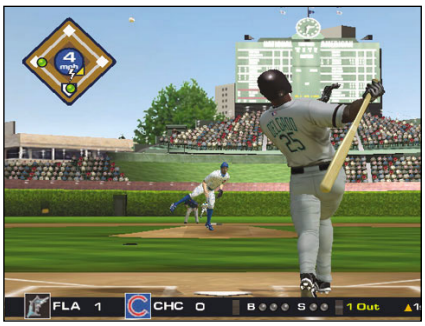
Available May 31. This well-known detective show, broadcast on ABC from 1985 to 1989, made a star out of Bruce Willis. These two seasons are the cream of the crop, so if you were a fan of David and Maddie back in their heyday, this DVD is calling your name.

games . . .

for you and the people in your life

BY VINCE COGLEY

Nintendo GameCube



Nintendo Pennant Chase Baseball

Nothing says summer like a footlong hot dog smothered in relish with a glass of fresh-squeezed lemonade while you root for the home team; if you can't make the trip to your favorite Big League stadium, consider Nintendo Pennant Chase Baseball. In addition to featuring real Major League Baseball announcers Bob Brenly, Rick Rizzs, and Tom Hutyler, Pennant Chase Baseball has updated rosters for every team for the 2005 season.

ESRB Rating: (E)veryone
$39.99
Nintendo
www.nintendo.com

Donkey Konga 2

We can't seem to get enough of those intoxicating DK Bongos, one of the most intuitive video game controllers on the market. The clever electronic bongos make another tour of duty in Donkey Konga 2, controlling Nintendo's primary primate and his simian sidekicks. In the game itself, players must drum along according to the on-screen rhythms to succeed. Songs range from the classic "La Bamba" to Blu Cantrell's "Hit 'Em Up Style."

ESRB Rating: (T)een
$34.99 ($49.99 with DK Bongos controller)
Nintendo
www.nintendo.com

Multiplatform

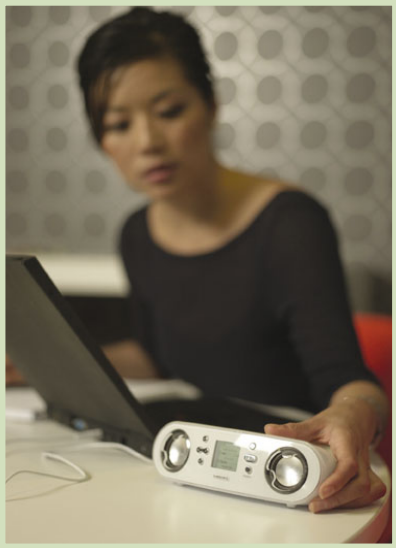
Batman Begins

Batman purists who found the Caped Crusader's last two silver-screen escapades unpalatable will likely be pleased to see this summer's fifth installment return Bruce Wayne to his dark, brooding self; the video game looks equally promising. The Dark Knight preturns with all of the handy Bat-gadgets your little brother wanted as a kid, and the movie's stars (Christian Bale, Michael Caine, Liam Neeson) lend their vocal talents to the game.

ESRB Rating: (T)een
$39.99
Electronic Arts
www.ea.com

TomTom Navigator 5 Wireless

TomTom's new Navigator 5 Wireless (approximately $249.99; www .tomtom.com) can turn a PDA from HP, palmOne, Sony, T-Mobile, and others into a GPS (global positioning system) navigation system. A pocket-sized GPS receiver talks to your PDA via Bluetooth, while the software suggests the best route and points of interest along the way. You'll get U.S. and Canadian maps, access to Tele Atlas digital map databases of 18 European countries, and an adapter for your car's 12V jack. TomTom also plans to sell the software separately; it's a free download for users of most earlier Navigator versions.



Philips PSS110 Personal Sound System

This is a traveling woman's dream gadget. There's no other way to say it. You can enjoy Philips' Personal Sound System ($149.99; www.philips.com) as an MP3 and WMA player on the plane, using headphones so it won't bother the large John Grisham fan next to you. You can use it as an alarm clock in the hotel room, turning on its FM tuner in the morning as you get ready for your meeting. And during your presentation, you can connect it to your notebook to give voice to your PowerPoint slides. Rechargeable batteries power the warm, room-filling stereo sound, while an included travel case awaits the journey home. Simply perfect.

SkinIt PowerBook Skins

Armor your Apple PowerBook against scratches and make a fashion statement at the same time. SkinIt offers perfect-fit, adhesive, removable vinyl skins for 12-inch, 15-inch, and 17-inch models ($24.95; www.skinit .com). Hundreds of design options include stained glass, animal and nature scenes, Jelly Bellys, fabrics, leaves of a presumably medicinal herb, a peace symbol, and even some Buddha statues. SkinIt says that sponsored and "premium" art is on the way. If you don't see what you're looking for (we didn't find "Switch" ad girl Ellen Feiss anywhere), have a custom skin made from your own photo or artwork for $2.95 more.

. . . & gifts

on the lighter side of technology

BY MARTY SEMS

Retroscope

Evolution Of The Camcorder

1967

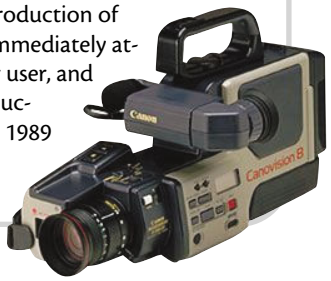
Sony DV-2400 Video Rover

With the need for portable video growing among video enthusiasts and film makers, Sony introduced the DV-2400, consisting of a video camera that filmed only in black and white. This device led the way to similar units by JVC, Panasonic, and others.

1985

Canon Canovision 8VM-E1

The Canovision 8VM-E1 was the first video camera that integrated record and playback functions. Because Canon focused on the design and production of lenses, the company's camcorders immediately attracted the more serious camcorder user, and the Canovision 8 A1, the 8VM-E1's successor, attracted strong attention in 1989 as a camcorder with the new Hi-8 format and stereo sound.



1975

First Consumer VCRs

The VCR was crucial to the development of the camcorder. Sony introduced the SL-6300 Betamax Home Use VCR in 1975 and the stand-alone SL-7200 unit in 1976. Also in 1976 JVC introduced the HR-3300, the first VHS home-recording unit. Within a couple years, VHS proved to be consumers' choice over Betamax for video-recording tape formats.

1984

Kodak KodaVision 2200 & 2400

In 1984 Kodak introduced the first 8mm camcorders. The KodaVision 2200 and KodaVision 2400 differed primarily in that the latter provided an autofocus system. Both weighed approximately five pounds, and each used 60- or 90-minute videocassettes. Both also required a separate VCR cradle for playback.

1982

JVC VHS-C & Sony BVW-1

Both Sony and JVC introduced products merging the video camera and video recorder in mid-1982, and even in early stages, the name "camcorder" became the norm. In June 1982 JVC announced a camcorder with its mini-VHS format, VHS-C. Before the end of the year, Sony launched the BVW-1, a Betacam camcorder that used 1/2-inch tape. This camera was ideal for broadcast news because cameramen could hold it steadily on one shoulder.

1985

Sony CCD-M8U

Unveiled at the 1985 Consumer Electronics Show, this Mini-8 camcorder featured a charge-coupled device (hence the CCD name), a technology that formed images by the use of electronic sensors instead of chemicals on film. The result was sharper, clearer video signals and lighter cameras that were easier on batteries.

1992

Sharp LCD ViewCam

Sharp Electronics introduced the first LCD for cameras in October 1992. The first camcorder with a built-in LCD, this device revolutionized the way in which users could view what they were capturing.

1995

Sony DCR-VX1000

1995 proved a major year in the development of the camcorder, as Sony introduced the first digital camcorder, the DVR-VX1000, with Panasonic, JVC, and Sharp soon following suit. Many companies then adopted the recording standard called DV and a videotape standard called mini-DV. DV remains an important standard today.

1997

Canon XL1

A high-end digital camcorder, the XL1 was the first MiniDV camcorder with interchangeable lenses. The camcorder's rugged construction and high video quality helped convince NASA to adopt it as the official camcorder for use on its space shuttles.

2005

Deja View Camwear 100

The first wearable camcorder, the Camwear 100 camera attaches to glasses or a hat and feeds continuous video into a separate unit that has a flash SD (Secure Digital) memory card that can store up to 1GB. When you press the Record button, the camcorder then stores the previous 30 seconds of streamed video.

2000

Hitachi DZ-MV100 DVD-RAM Camcorder

The first camcorder that let you record directly onto DVD, the DZ-MV100 led the camcorder industry into the new century, allowing users to store MPEG-2 (Moving Picture Experts Group-2) video and JPEG (Joint Photographic Experts Group) images on one disc. The camera itself cost about $2,300.

What's Next?

Well, now that you can record video hands-free, as with the Camwear 100, what else could you possibly want? Smaller and smaller camcorders with increased recording capabilities, of course. The camcorder's future is clearly focused on digital video with interest in the development of memory cards or hard drives for storage, and built-in editing features are proving important for users, as well. ce

BY NEIL RANDALL

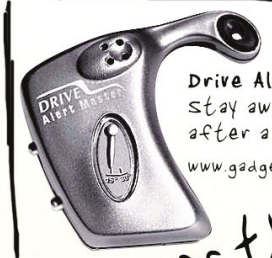
Vacation Checklist

CE By The Seashore

Remember when a bulky camera around your neck made you look like one of those tourists? No longer. Blend in with the natives, and add a little fashion to boot, when you take these devices to a sunny seaside locale.

DVD camcorder
No boring vacation footage here
www.sony.com

Powershot Digital camera
A stylish update to a vacation must-have
www.canon.com



Drive Alert Master
Stay awake and safe, even after a sun-filled day
www.gadgetuniverse.com

Solar charger
Plug in while lying out
www.thinkgeek.com

For the Drive

Talking Road Whiz
Keep your car on (or off!) the road
www.discoverystore.com

Just in case!!

Pocket Translator
How do you say "Bluetooth" in Italian?
www.hammacher.com

Pocket Radio Alarm Clock
Keep your suntan nice and even
www.cgets.com

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Now everyone will have fun in Hilton Head
www.kolnex.us

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Even the affable iPods hate sand
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Send quick emails to family and friends
www.thinkgeek.com

For the Kids

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